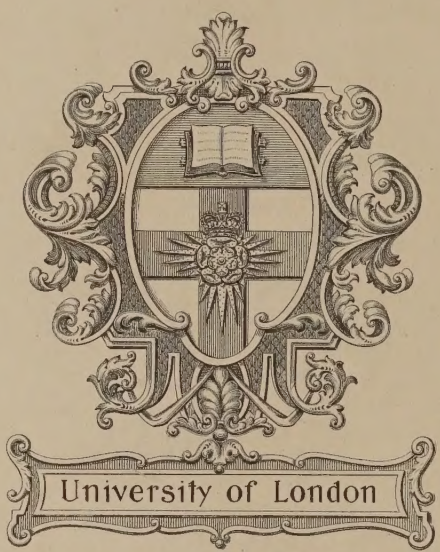
University of London

605876

REPORTS

FROM

COMMITTEES:

EIGHT VOLUMES.

—(8.)—

TAXATION (IRELAND); EXPIRING LAWS;
CHEMISTS AND DRUGGISTS BILL:
COURTS OF JUSTICE CONCENTRATION BILL;
MIDDLESEX INDUSTRIAL SCHOOLS BILL;
PRISONS BILL;
SALMON FISHERY ACT (1861) AMENDMENT BILL;
WATERWORKS BILL;
BANKRUPTCY ACT; MINES; THAMES RIVER.

Session

7 *February*—6 *July* 1865.

VOL. XII.

1865.

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1865.

EIGHT VOLUMES:—CONTENTS OF THE

EIGHTH VOLUME.

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FROM THE

SELECT COMMITTEE

ON THE

TAXATION OF IRELAND;

TOGETHER WITH THE

PROCEEDINGS OF THE COMMITTEE,

MINUTES OF EVIDENCE,

APPENDIX, AND INDEX.

REFORM CLUB
PALL MALL

Ordered, by The House of Commons, *to be Printed,*
1 *June* 1865.

Jovis, 2° die Martii, 1865.

SELECT COMMITTEE re-appointed "to consider the Taxation of Ireland, and how far it is in accordance with the provisions of the Treaty of Union, or just in reference to the resources of the country."

Ordered, THAT it be an Instruction to the Committee to inquire into the system upon which advances are made and repayments required by the Imperial Government, for drainage and other works of public utility in Ireland.

Lunæ, 13° die Martii, 1865.

Ordered, THAT the Petition of the Dunmanway Union Guardians, setting forth grievances, and praying relief, be referred to the Committee.

Veneris, 17° die Martii, 1865.

Select Committee nominated of—

Colonel Dunne.	Sir Robert Peel.
Sir Edward Grogan.	Sir Stafford Northcote.
Mr. Longfield.	Mr. Howes.
The O'Conor Don.	Mr. Hankey.
Mr. Hennessy.	Mr. Lowe.
Sir Frederick Heygate.	Mr. Banks Stanhope.
Sir George Colthurst.	

Ordered, THAT the Committee have power to send for Persons, Papers and Records.

Ordered, THAT Five be the Quorum of the Committee.

Martis, 21° die Martii, 1865.

Ordered, THAT Lord John Browne be added to the Committee.

Veneris, 24° die Martii, 1865.

Ordered, THAT Mr. Finlay be added to the Committee.

Lunæ, 27° die Martii, 1865.

Ordered, THAT the Report of the Select Committee on the Taxation of Ireland (Session 1864) be referred to the Committee.

Jovis, 1° die Junii, 1865.

Ordered, THAT the Committee have power to report their Observations, together with the Minutes of Evidence taken before them to The House.

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REPORT.

THE SELECT COMMITTEE re-appointed to consider the TAXATION of IRELAND, and how far it is in accordance with the Provisions of the Treaty of Union, or Just in reference to the Resources of the Country: and who were instructed to inquire into the System upon which Advances are made and Repayments required by the Imperial Government for Drainage and other Works of Public Utility in Ireland:——HAVE considered the Matters to them referred, and agreed to the following REPORT:

THE question to which your Committee, in the first instance, addressed themselves, was that of the conformity of the taxation of Ireland with the provisions of the Treaty of Union.

They found it alleged that the provisions of that treaty had been violated by the way in which the accounts were kept and taxation levied in the years immediately after the passing of the Act of Union; and also in 1816, by the setting aside of the arrangements for making separate provision for the charge of the English and the Irish debts respectively, and by the introduction of a system of indiscriminate, and nearly uniform, taxation in each country, in place of the system established at the time of the Union, under which, while each country had to make provision, in the first instance, for its own separate expenditure, Great Britain was called upon to contribute fifteen-seventeenths, or about 88¾ per cent., and Ireland two-seventeenths, or about 11¾ per cent., of the sums required for the joint expenditure of the United Kingdom.

The arguments by which these allegations are supported will be found in the evidence of Mr. Dillon and of Mr. Fisher. It will be seen on examination that they mainly turn upon the following points: First, what is the correct interpretation of the 7th Article of the Treaty of Union with regard to the creation of future debt, and to the circumstances under which indiscriminate taxation might be introduced: Secondly, were the financial transactions between the two countries carried on in the mode pointed out by that article: and, Thirdly, were the accounts of these transactions consistent and correct.

Your Committee proceed to examine these points: and, in the first place, that which relates to the construction of the Treaty of Union.

The Seventh Article of the Treaty of Union, which is embodied in the Act of Union (39 & 40 Geo. 3, c. 67), runs thus:—

Interest and Sinking Fund of either Kingdom defrayed separately.

How expenditure of United Kingdom defrayed and provided for.

"That it be the Seventh Article of Union, that the charge arising from the payment of the interest, and the sinking fund for the reduction of the principal of the debts incurred in either Kingdom before the Union, shall continue to be separately defrayed by Great Britain and Ireland respectively, except as hereinafter provided:

"That, for the space of twenty years after the Union shall take place, the contribution of Great Britain and Ireland respectively, towards the expenditure of the United Kingdom in each year, shall be defrayed in the proportion of fifteen parts for Great Britain and two parts for Ireland: and that at the expiration of the said twenty years, the future expenditure of the United Kingdom (other than the interest and charges of the debt so

which either country shall be separately liable) shall be defrayed in such proportion as the Parliament of the United Kingdom shall deem just and reasonable upon a comparison of the real value of the exports and imports of the respective countries, upon an average of the three years next preceding the period of revision; or on a comparison of the value of the quantities of the following articles consumed within the respective countries, on a similar average, videlicet, beer, spirits, sugar, wine, tea, tobacco, and malt; or according to the aggregate proportion resulting from both these considerations combined; or on a comparison of the amount of income in each country, estimated from the produce for the same period of a general tax, if such shall have been imposed on the same descriptions of income in both countries; and that the Parliament of the United Kingdom shall afterwards proceed in like manner to revise and fix the said proportions according to the same rules or any of them, at periods not more distant than 20 years, nor less than seven years from each other; unless, previous to any such period, the Parliament of the United Kingdom shall have declared, as hereinafter provided, that the expenditure of the United Kingdom shall be defrayed indiscriminately, by equal taxes imposed on the like articles in both countries: That, for the defraying the said expenditure according to the rules above laid down, the revenues of Ireland shall hereafter constitute a Consolidated Fund, which shall be charged, in the first instance, with the interest of the debt of Ireland, and with the sinking fund, applicable to the reduction of the said debt, and the remainder shall be applicable towards defraying the proportion of the expenditure of the United Kingdom, to which Ireland may be liable in each year; that the proportion of contribution to which Great Britain and Ireland will be liable, shall be raised by such taxes in each country respectively, as the Parliament of the United Kingdom shall from time to time deem fit: Provided always, that in regulating the taxes in each country, by which their respective proportions shall be levied, no article in Ireland shall be made liable to any new or additional duty, by which the whole amount of duty payable thereon would exceed the amount which will be thereafter payable in England on the like article: That, if at the end of any year any surplus shall accrue from the revenues of Ireland, after defraying the interest, sinking fund, and proportional contributions and separate charges to which the said country shall then be liable, taxes shall be taken off to the amount of such surplus, or the surplus shall be applied by the Parliament of the United Kingdom to local purposes in Ireland, or to make good any deficiency which may arise in the revenues of Ireland in time of peace, or be invested by the Commissioners of the National Debt of Ireland in the Funds, to accumulate for the benefit of Ireland at compound interest, in case of the contribution of Ireland in time of war; provided that the surplus so to accumulate shall at no future period be suffered to exceed the sum of 5,000,000*l.*: That all monies to be raised after the Union, by loan, in peace or war, for the service of the United Kingdom by the Parliament thereof, shall be considered to be a joint debt, and the charges thereof shall be borne by the respective countries in the proportion of their respective contributions; provided that, if at any time, in raising their respective contributions hereby fixed for each country, the Parliament of the United Kingdom shall judge it fit to raise a greater proportion of such respective contributions in one country within the year than in the other, or to set apart a greater proportion of sinking fund for the liquidation of the whole or any part of the loan raised on account of the one country than of that raised on account of the other country, then such part of the said loan, for the liquidation of which different provisions shall have been made for the respective countries, shall be kept distinct, and shall be borne by each separately, and only that part of the said loan be deemed joint and common, for the reduction of which the respective countries shall have made provision in the proportion of their respective contributions: That if at any future day the separate debt of each country respectively shall have been liquidated, or, if the values of their respective debts (estimated according to the amount of the interest and annuities attending the same, and of the sinking fund applicable to the reduction thereof, and to the period within which the whole capital of such debt shall appear to be redeemable by such sinking fund) shall be to each other in the same proportion with the respective contributions of each country respectively; or if the amount by which the value of the larger of such debts shall vary from such proportion shall not exceed one hundredth part of the said value; and if it shall appear to the Parliament of the United Kingdom, that the respective circumstances of the two countries will thenceforth admit of their contributing indiscriminately, by equal taxes imposed on the same articles in each, to the future expenditure of the United Kingdom, it shall be competent to the Parliament of the United Kingdom to declare that all future expense thenceforth to be incurred, together with the interest and charges of all joint debts contracted previous to such declaration, shall be so defrayed indiscriminately by equal taxes imposed on the same articles in each country, and thenceforth from time to time, as circumstances may require, to impose and apply such taxes accordingly, subject only to such particular exemptions or abatements in Ireland, and in that part of Great Britain called Scotland, as circumstances may appear from time to time to demand: That, from the period of such declaration, it shall no longer be necessary to regulate the contribution of the two countries towards the future expenditure of the United Kingdom, according to any specific proportion, or according to any of the rules hereinbefore prescribed: Provided nevertheless, that the interest or charges which may remain on account of any part of the separate debt with which either country shall be chargeable, and which shall not be liquidated or consolidated proportionably as above, shall, until extinguished, continue to be

Consolidated Fund.

Proviso.

Proviso.

be defrayed by separate taxes in each country: That a sum, not less than the sum which has been granted by the Parliament of Ireland on the average of six years immediately preceding the 1st day of January in the year 1800, in premiums for the internal encouragement of agriculture or manufactures, or for the maintaining institutions for pious and charitable purposes, shall be applied, for the period of 20 years after the Union, to such local purposes in Ireland, in such manner as the Parliament of the United Kingdom shall direct: That, from and after the 1st day of January 1801, all public revenue arising to the United Kingdom from the territorial dependencies thereof, and applied to the general expenditure of the United Kingdom, shall be so applied in the proportions of the respective contributions of the two countries."

The language of this Article is far from clear, and there are several points on which doubts have arisen as to its meaning. The principal seem to be, whether it was consistent with the Treaty of Union that any addition should be made to the separate debt of Ireland after the Union; and next, whether, under it, indiscriminate taxation could be levied without a special declaration by Parliament that the time had arrived for doing so.

On the first point it was urged by Mr. Dillon and Sir C. O'Loghlen that, strictly speaking, after the Union no addition could be made to the separate debt of Ireland except for local purposes; whilst Mr. Napier, on the other hand, gave his opinion that an addition to the separate debt was specially contemplated by the Treaty. As to the levying of indiscriminate taxation, most of the witnesses seemed to agree that the terms of the Treaty of Union had not been strictly adhered to, no formal declaration of its necessity having been made by Parliament as contemplated by the Treaty. Mr. Napier, however, seemed to think that the Act of 1816 for amalgamating the British and Irish Exchequers did in substance amount to a declaration such as was required by the Treaty of Union.

Ev. 691–695.
Ev. 31 and 55.
Ev. 3600. 3631, *et seq.*
Ev. 3636.

It is obvious that if a separate debt could not be created, Ireland might have been required to make good, year by year, her contribution of 2-17ths to the joint expenditure of the whole kingdom, by taxes bearing to the taxes of Great Britain the proportion of 2 to 15, and to bear her share of the joint debt which would have been created to make up the deficiency. Now, the joint expenditure of the United Kingdom in the years 1801–16, was 841,948,719 *l.* The proportion of this sum for which Ireland was required to make provision by taxes or loans, (viz. 2-17ths), was 99,052,790 *l.* She was also required to provide for her separate expenditure, which (assuming that no addition had been made to her separate pre-union debt) would have amounted to 25,157,622 *l.* for debt and sinking fund, and 4,330,920 *l.* for other separate expenditure, including charges for services prior to the Union, making a total of 128,541,332 *l.* In point of fact she expended 159,737,804 *l.*; and even this sum fell short of the whole amount of expenditure charged upon her, including her proportion of the joint expenditure, as 2,118,685 *l.* remained due from her to Great Britain on the 5th January, 1817. The difference between these total sums arises from the fact that she did not provide for the whole of her expenditure by taxation, but by a system of borrowing, and that she had consequently to bear the charge of compound interest; but to this she would have been equally liable whether the debt she incurred were called joint or separate, unless she could have thrown upon Great Britain the burden of 15-17ths not only of the joint expenditure, but of the separate deficiency of Ireland likewise.

App. 11, p. 393.
Ev. 6531.
App. 11, p. 394.
Ev. 6533.

The state of the case is clearly shown in the Report of the Select Committee of 1812, in which it is pointed out that it would have made but a nominal difference had so much of the Irish loan of each year as bore to the British loan the proportions of the contribution of Ireland, viz. 2 to 15, been considered as joint debt, because the charge to be borne by Ireland in respect of the two portions of loan, viz. the joint and the separate portion would, in that case, have been exactly equal to that which was incurred on account of the Irish debt undivided. Mr. Dillon also admits that Ireland was in as good a position as if the loans had been joint loans.

Ev. 1184.

If, indeed, a larger amount than the proportion above referred to had been carried to joint debt, Ireland would have been relieved, but only at the expense of Great Britain, which would have had, besides paying her own contribution by taxes and loan, to bear 15-17ths of the deficiency of Ireland's contribution. Thus, assuming 34,000,000 *l.* to have been required for joint expenditure, and Great Britain to have raised 15,000,000 *l.* by taxation, while Ireland raised only 1,000,000 *l.*

1,000,000 *l.* in that manner, if the remaining 18,000,000 *l.* had been raised by the creation of joint debt, Great Britain would have been made liable not only for her fair proportion of the joint deficiency, but for 15-17ths of 1,000,000 *l.*, the amount of Ireland's separate deficiency, in addition.

On the second point, whether the financial transactions between the two countries were carried on in the way pointed out by the Treaty of Union, your Committee are of opinion that, technically at least, there were departures from the terms of that Treaty. The Treaty of Union clearly contemplated joint debts after the union, but no account of joint debt was ever kept, all loans being registered as separate. The Treaty of Union contemplated that the proportions paid by Great Britain and Ireland should each year be as 15 to 2, but it appears that in the earlier years Ireland paid more than her proportion, whilst in the latter years she paid less; and the Treaty of Union also provided that Ireland should be credited with a proportion of the revenue arising from territorial dependencies of the United Kingdom, which credit, according to Mr. Chisholm, she never received. These departures from the precise terms of the Treaty of Union are not now perhaps matters of pressing importance, but your Committee still believe it desirable to mention them, as they may have led to some of the misapprehensions that have existed on the subject.

Ev. 6895.

App. p. 394.

Ev. 6467.

Many of the difficulties arising as to the construction of the Treaty of Union are perhaps due to the fact that its framers did not contemplate the large war expenditure which occurred in the years following the union, and seem rather to have anticipated a surplus in the revenues of each country than a deficiency, and to have provided with more care for the contingency of the diminution of the larger debt than for, what really took place, the increase of the smaller one. It does not appear, however, that the heavy charge on Ireland was the result of the accounts being kept separate, nor of any technical error in carrying out the Treaty of Union, but of the failure of Ireland to meet by taxation as large a proportion of her contribution as was met in that way by Great Britain.

The question of the original justice of the proportions of contributions fixed by Treaty of Union does not come within the order of reference of your Committee, but experience proved that the resources of Ireland were not sufficient to meet it. On this point Mr. Chisholm gives strong evidence in one of the papers furnished to the Committee, and concludes by stating, "with this evidence it appears to be impossible to reconcile the assumed fact of the ability of Ireland to contribute 2-17ths or 11·7 per cent. of the Imperial expenditure, with the ascertained fact of her inability to contribute from her own resources more than 4·5 per cent. of the money required to be raised by the creation of debt, to provide for the largely increased war expenditure during the years from 1801 to 1816." The Committee of 1811, in their Report also state, that "Ireland had advanced in permanent taxation more rapidly than Great Britain herself, notwithstanding the immense exertions of the latter country, even including the extraordinary war taxes; the permanent taxation of Great Britain having increased from 1801 to 1811 in the proportions of 18½ to 10, and the whole revenue, including war taxes, as 21¼ to 10; while the revenue of Ireland had, in the same time, increased in the proportion of 23 to 10." In spite of these exertions, however, the taxation of Ireland, which was mainly indirect, failed to realize what was expected; and as it was thought inexpedient to extend the Income Tax to that country, a resort to loans was rendered necessary, and these involved a charge not only for simple but for compound interest. There can be no doubt but that Ireland was thus in the end a sufferer from the disproportion between the amount raised by loans, and that raised by taxation.

App. 1865.

Within the same period, 1801–1816, the resources of Great Britain yielded by war taxes, which did not apply to Ireland, the net sum of 264,738,020 *l.* Raising this large additional sum by taxation, she found it unnecessary to have recourse to loans to the same extent, in proportion to her resources, as Ireland did. This fact explains the alteration in the proportions between the debts. While the separate unredeemed funded debt of Great Britain increased from 420,305,944 *l.* in 1801 to 682,520,033 *l.* in 1817, the separate unredeemed funded debt of Ireland increased in the same period from 26,841,219 *l.* to 113,680,158 *l.*, and the proportion between the two, which at the Union was about 1 to 15·5, became in 1816 about 1 to 6.

Parl. Paper, No. 110 of Sess. 1865, p. 12.

App. 12, p. 402.

Within

Within the same period the unfunded debt of Great Britain in Exchequer Bills advanced from 26,080,100 *l.* to 44,650,300 *l.*, and the unfunded debt of Ireland from 1,699,938 *l.* to 5,304,615 *l.* App. 14, p. 410.

This was in substance the state of facts laid before the Select Committee of 1815, and it forms the ground of their recommendation that the debts should be consolidated, and the Exchequers of the two countries amalgamated. Your Committee are of opinion that, under the circumstances, that Committee were justified in making, and the Imperial Parliament in acting upon, that recommendation.

On the last point, as to the correctness of the accounts, it has been alleged by some of the witnesses examined before your Committee that the accounts which have from time to time been laid before Parliament, including those which form the groundwork of the recommendation of the Committee of 1815, are inconsistent one with another; and that the conclusions of that Committee are thereby invalidated. Your Committee have bestowed a great deal of time and attention on the investigation of these alleged inconsistencies. They find that nearly all of them are apparent rather than real, and that they arise, for the most part, from the different principles upon which different accounts have been called for by Parliament, and prepared on different occasions, and from the want of sufficient attention on the part of those who have made use of these accounts without observing the principles on which they have been framed. It is obvious, for instance, that when one account of the revenues of a particular year is called for, including arrears and balances, and another account is called for at another time, excluding them, the two accounts must differ, and ought not to be used indiscriminately, as has sometimes been done. The various causes of confusion in the comparison of these accounts are well stated by Mr. Chisholm. Your Committee do not think it necessary to enter into the details of the investigation they have pursued; and consider it sufficient to observe, that the alleged discrepancies have been satisfactorily explained by the officers of the Treasury and of the Exchequer. They desire, in passing, to express their thanks to Mr. Chisholm, the Chief Clerk of the Exchequer, for the pains he has taken and the assistance he has rendered them in their laborious inquiry. Ev. 6613, App. 17, p. 419.

It would have been satisfactory to your Committee if they could have presented an account of the total net liabilities of the two countries at the Union, and again at the time of the amalgamation of the Exchequers; but after careful consideration, they find it impossible to do so. An approximation to such an account for Great Britain alone at the time of the Union may be found in the Appendix; but, as is there shown, a similar Return cannot be made for Ireland, as no similar estimate of her liabilities on account of the demands outstanding for supply services exists. It appears, too, on a close investigation, first, that the estimated liabilities of Great Britain for demands outstanding at the time of the Union fall far short of the amounts which were actually paid on account of those demands in the course of the 16 years after the Union; secondly, that no complete account is taken of the Ways and Means by which those demands were met; and thirdly, that even if the account for Ireland could be completed like that for Great Britain, great inaccuracy would result from reckoning the balances in the hands of collectors and receivers as assets available to meet the liabilities, inasmuch as a considerable proportion of the balances due from Irish collectors was never received. It would, moreover, lead to great confusion if an attempt were made to set balances of this kind, or temporary balances in the Exchequer appropriated to supply services, against the amount of the funded and unfunded debt bearing annual interest. All that your Committee can do is to state the values of the respective debts, which by the terms of the Treaty of Union were to be "estimated according to the amount of the interest and annuities attending the same, and of the sinking fund applicable to the reduction thereof." A statement, founded on a calculation made by Mr. Finlaison, the Actuary of the National Debt Office, shows that on the 1st January 1801, the value of unredeemed funded debt of Great Britain, including the Imperial loan to Germany, was 303,788,485 *l.*, and that of the unredeemed funded debt of Ireland 21,498,872 *l.*, being in the proportion of 28·2 to 2; and that on the 5th January 1817, the value of the British unredeemed funded debt was 501,648,734 *l.*, and of the Irish debt 81,688,316 *l.*, being in the

App. 12, p. 396–7.

Parl. Paper 229, of Sess. 1865.

App. 1865.

App. 14, p. 410.

the proportion of 12·2 to 2. To these amounts should be added the unfunded debts in Exchequer bills, or in Irish Treasury bills, which in 1801 stood at 26,080,100 *l.* for Great Britain, and at 1,699,938 *l.* for Ireland; and in 1817 at 44,650,300 *l.* for the former, and 5,304,615 *l.* for the latter. The result, therefore, is, that the value of the whole debt of Great Britain at the time of the Union was 329,868,585 *l.*, and the value of the whole debt of Ireland 23,198,810 *l.*, and the proportion as 28·4 to 2; and that the value of the whole debt of Great Britain at the time of the amalgamation of the Exchequers was 546,299,034 *l.*, the value of the whole debt of Ireland 86,992,931 *l.*, and the proportion as 12·5 to 2.

The period had therefore arrived when, according to the construction put upon the Treaty of Union by the Committee of 1815, and confirmed by Mr. Napier and other authorities, the amalgamation of the debts and the introduction of a system of indiscriminate taxation was intended to take place. Had that amalgamation not taken place, and had the system of raising revenue which prevailed from 1801 to 1816 been continued, the Irish separate debt would have continued to increase until the country might have been crushed by it.

By the Treaty of Union it was provided that even after amalgamation certain abatements and exemptions from indiscriminate taxation should be allowed to Ireland if the circumstances of the country seemed to require them. This provision seems to have been attended to; for although from 1817 the system of taxation adopted has been, in a certain sense, indiscriminate, yet Ireland has been so far favoured that she has been more or less exempted from certain taxation which has been laid upon Great Britain. After 1823, when the trade between the two countries was put upon the footing of a coasting trade, the Customs' duties soon became identical. But the Excise duty on spirits was for a long time lower in Ireland than in Great Britain; the Income Tax was not for a long time extended to her; and she is still exempt from the Land and Assessed Taxes, and from the duties on railway passengers, hackney and stage carriages, patent medicines, and racehorses, the gross receipt of which in Great Britain amounted to 3,948,029 *l.* in 1863–4.

App. 1865.

Of late years considerable additions have been made to Irish taxation, and it has been placed more nearly on an equality with that of Great Britain. The spirit duties have been equalised, and the Income Tax has been applied to the whole kingdom. At the same time the whole taxation of the entire kingdom has been increased. The amount of revenue raised in the United Kingdom by taxation, excluding casual and miscellaneous receipts, in the year 1852–3, was 56,867,652 *l.* In the year 1861–2 the amount was 68,153,355 *l.*, showing an addition of 20 per cent. to the burdens of the people. Moreover, this addition has been made in such a manner as to lay upon Ireland a greater proportionate burden than has been laid upon Great Britain. The increase of taxation in Great Britain in the 10 years which have been referred to was 17 per cent.; the increase in Ireland was 52 per cent. The following comparative statement will show the proportion of the receipts of ordinary revenue in the two countries respectively in periods of five years from the Union to the year 1862:—

App. 15, p. 413.

App. 15, p. 414.

In four years ending 5th January 1806, the proportion of Irish revenue to British was about - - -	1–13th.
In the five years ending 5th January 1811 - - -	1–14th.
„ „ „ „ 1816 - - -	1–13th.
„ „ „ „ 1821 - - -	1–12th.
„ „ „ „ 1826 - - -	1–13th.
„ „ „ „ 1831 - - -	1–13th.
„ „ „ „ 1836 - - -	1–12th.
„ „ „ „ 1841 - - -	1–12th.
„ „ „ „ 1847 - - -	1–11th.
„ „ „ „ 1852 - - -	1–11th.
„ „ „ 31st March 1857 - - -	1–10th.
„ „ „ „ 1862 - - -	1–9th.

App. 1865.

From another Account it appears that the proportion of benefit which Ireland has received by the remissions of taxation which have taken place since 1816, has been as 2 to 26·5 of the benefit conferred upon Great Britain. An examination of the Return from which this result is taken, will show that in the years from 1816 to 1841 inclusive, the remissions to Great Britain were in the proportion of 22·4 to 2 to the remissions to Ireland; in the years 1842 to 1852 the proportion

Parl. Paper 110 of Sess. 1865, p. 17.

proportion was 34 to 2; and in the years 1853 to 1864 the proportion was 28·6 to 2. If the Income Tax were excluded from the account, it would appear that the proportion in the last period was 33 to 2. The additions to taxation in the same periods were as follow:—Between 1816 and 1841 the proportion was 13 to 2; between 1841 and 1852 it was 30 to 2, or, excluding the Income Tax, 4 to 2; between 1853 and 1864 it was 13 to 2, or, excluding the Income Tax, 9·6 to 2. For the whole period from 1816 to 1864 it was 14·3 to 2. Parl. Paper 286. Sess. 1865.

The net result will be as follows:— App. 1865.

	Taxes Remitted.	Taxes Imposed.	Balance of Taxes Remitted.	
			Amount.	Proportion.
1816–64.	£.	£.	£.	Per Cent.
Great Britain - - -	72,479,859	35,589,839	36,610,011	98·63 } or { 144 to 2.
Ireland - - - -	5,488,979	4,981,023	507,956	1·37 }
TOTAL - - £.	77,968,829	40,570,862	37,117,967	100

It must be borne in mind that at the commencement of the period in question Great Britain bore many taxes from which Ireland was exempt. The increasing produce of many of the duties thus exclusively charged on Great Britain, between 1817 and the various dates of their repeal or reduction, will account for the large proportion in which the balance of remissions in Great Britain exceeds the balance of remissions in Ireland.

As regards the local taxation of the two countries, your Committee find much difficulty in obtaining adequate information. A Paper which has been prepared by Mr. Chisholm, and which will be found in the Appendix, shows that no account approaching completeness can be given for the year of the Union (1801), or for the year of the amalgamation of the Exchequers (1817). For 1845 and 1863-4 respectively, Mr. Chisholm computes the proportionate local taxation of all kinds, so far as it can be ascertained, as follows:— App. 1865. Ib.

	1845.		1863–4.	
	Amount.	Per Cent.	Amount.	Per Cent.
	£.		£.	
England and Wales - - - -	10,456,437		12,453,052	
Scotland - - - - - - -	734,383		1,312,801	
GREAT BRITAIN - - -	11,190,820	88·24	13,765,853	88·24
Ireland - - - - - - - -	1,490,631	11·76	1,816,275	11·76
UNITED KINGDOM - -	12,681,451		15,582,128	

According to this statement, the local burdens of the two countries are very nearly in the proportion assigned to each at the time of the Union for general taxation, viz., 88¼ to 11¾ per cent. The proportion which this amount of the local taxation of Ireland in 1863–4 bears to the property assessed under Schedule (A) of the Income Tax, on which description of property it mainly falls, is 13·5 per cent. In Great Britain the proportion is 10·9 per cent. As regards the aid which either country has received from Imperial funds towards its local taxes or for local purposes, Mr. Chisholm supplies the following information:— *See* App. 1865.

I.—Grants in Aid of Local Taxation.

App. 1865.

	1801.	1817.	1845.	1863-4.
	£.	£.	£.	£.
England and Wales - - - - - -	67,262	143,010	408,563	1,600,866
Scotland - - - - - - - -	* - -	4,640	107,190	200,729
Great Britain - - -	67,262	147,650	515,753	1,801,595
Ireland - - - - - - - -	43,883	32,769	411,879	894,801
United Kingdom - - -	111,145	180,419	927,632	2,696,396

App. 1865.

II.—Grants for Charitable or Literary Purposes, and for the Encouragement of Agriculture or Commerce.

	1801.	1817.	1845.	1863-4.
	£.	£.	£.	£.
Great Britain - - - - - - -	10,636	10,957	93,926	921,080
Ireland - - - - - - - -	103,093	235,468	126,063	403,187
United Kingdom - - -	113,729	246,425	219,989	1,324,267

Adding these Classes of Grants together, we find the Total Amount of Aid to be as follows:—

	1801.		1817.		1845.		1863-4.	
	Amount.	Per Cent.	Amount.	Per Cent.	Amount.	Per Cent.	Amount.	Per Cent.
	£.		£.		£.		£.	
Great Britain -	77,898	34	158,607	37	609,679	53	2,722,675	67
Ireland - -	146,976	65	268,237	62	537,942	46	1,297,988	32

These Grants are exclusive of Grants for Public Works.

It will be observed that the cost of the Irish constabulary is included among the items of Imperial expenditure in aid of local taxation. It must, of course, be borne in mind that the services rendered by the constabulary are not only of a local character, but that the force is employed for the collection of a considerable portion of the Imperial revenue, and that it may also be to some extent regarded as a military body. Your Committee will not attempt to distinguish between the amount expended on the constabulary as an Imperial force, and the amount granted in aid of local taxation. Upon another point which has given rise to much discussion, the grants for Poor-law medical officers and for workhouse schoolmasters, your Committee are of opinion that it would be reasonable that the same aid should be extended to Ireland as is already extended to England. It is evident, they think, that if the Poor-law system had been the same in 1846 as it is now, the aid in question would have been made to both countries simultaneously. Since 1845 the share which Great Britain has had in the remission of Imperial taxation has been proportionally much larger than that which Ireland has had; and the additions made to the Imperial taxation

* The civil expenditure of Scotland is imperfectly shown under those heads in the years 1801 and 1817.

tion of Ireland have been proportionally heavier than those made to the taxation of Great Britain, while at the same time it can hardly be doubted that Great Britain has derived a larger measure of advantage than Ireland from the repeal of the corn laws, as a compensation for which the boon was originally given by Sir R. Peel.

It is not surprising that the large increase which your Committee have noticed in the general taxation between 1852 and 1862, and again in the local taxation since 1845, should have given rise to complaint. Nor is it surprising that louder complaints should have been made by Ireland than by other parts of the United Kingdom. The pressure of taxation will be felt most by the weakest part of the community, and as the average wealth of the Irish taxpayers is less than the average wealth of the English taxpayers, the ability of Ireland to bear heavy taxation is evidently less than the ability of England. Mr. Senior, whose evidence upon the position of Ireland will be found very suggestive, remarks that the taxation of England is both the heaviest and the lightest in Europe; the heaviest as regards the amount raised, the lightest as regards the ability to bear that amount; but that in the case of Ireland it is heavy both as regards the amount and as regards the ability of the contributor; and he adds that England is the most lightly taxed, and Ireland the most heavily taxed country in Europe, although both are nominally liable to equal taxation. Ev. 5031. Ev. 5443.

Your Committee are directed to inquire whether the Taxation of Ireland is "just, in reference to the resources of the country." But they have found it extremely difficult to ascertain the comparative wealth of Great Britain and Ireland.

In App. 9, page 151, Mr. Chisholm has entered at some length into the "Relative ability of the two countries," according to the "Data relied on in the Treaty of Union." At page 153 Mr. Chisholm gives the real value of the Exports and Imports of the two countries, for the three years ending in 1863, from which it appears that the yearly trade of Ireland amounts on the average of those years to 7,631,272 *l.*, and that of Great Britain, to 397,305,129 *l.*, thus showing that the Exports and Imports of Great Britain are about 52 times as great as those of Ireland; but as no account is kept of the trade between the two countries, and as consequently these returns only relate to the Foreign and Colonial Trade, they cannot be relied on as giving a fair comparison between the two countries.

Mr. Chisholm next refers to the tonnage of vessels entering into, and clearing out from, the ports of the two countries. Taking the foreign trade alone, during the same period (page 156) it amounts for Ireland to 903,658; and for Great Britain to 25,719,623, or 28 times as much as that of Ireland. Mr. Chisholm does not give the coasting trade between Great Britain and Ireland separately since the year 1845, but he gives (page 156) the whole amount of its tonnage entering and leaving both countries, from which it appears that for Ireland the total tonnage, from and to all parts, amounts to 6,764,341, and for Great Britain to 31,580,306, or 4½ times as much. The total coasting trade to and from ports of the same country, amounts to, for Ireland, 336,576, and for Great Britain, 22,656,160, or nearly 68 times as much. Mr. Chisholm gives the registered tonnage of vessels belonging to Great Britain and Ireland (page 157), as being 248,410 for Ireland, and 4,700,736 for Great Britain, or 19 times as much.

The following table shows the proportions of vessels and tonnage belonging to the several ports of each country in several years, with the ratio of increase since 1802:—

RECAPITULATION.

	VESSELS.				TONNAGE.				Increase per Cent. over Average of 1802, 1803, and 1804.			
	Great Britain.		Ireland.		Great Britain.		Ireland.		Vessels.		Tonnage.	
	Number.	Proportion per Cent.	Number.	Proportion per Cent.	Amount.	Proportion per Cent.	Amount.	Proportion per Cent.	Great Britain.	Ireland.	Great Britain.	Ireland.
Average:												
1802–3–4 -	16,462	94·	1,052	6·	1,897,580	97·	57,814	3·	—	—	—	—
1814–15–16 -	20,164	94·5	1,174	5·5	2,380,171	97·5	61,707	2·5	22·5	11·6	25·4	6·73
1819–20–21 -	20,059	93·83	1,319	6·17	2,319,831	97·1	69,470	2·9	21·85	25·4	22·25	20·16
1843–44–45 -	21,284	91·2	2,058	8·8	2,797,719	93·	210,660	7·	29·3	95·6	47·4	264·3
1861–62–63 -	25,163	91·6	2,309	8·4	4,700,736	94·98	248,410	5·02	52·8	119·5	147·7	329·7

Mr. Chisholm next shows that it is impossible to ascertain the value of the exciseable articles consumed, and then proceeds (pages 158 and 159) to consider the "Income assessed to Income Tax." He shows that the total amount of property assessed to this tax for an average of the three years ending 1864, amounts, for Ireland, to 23,293,939 *l.*, and for Great Britain to 299,139,167 *l.*, or nearly 13 times as much.

Mr. Chisholm does not suggest any other mode of testing the comparative wealth of the two countries. He has, however, furnished the Committee with App. 1865. Returns, from which it appears—

1st. That the total amount of accumulated deposits in public savings banks on 20th November 1863, was, for Ireland, 2,071,523 *l.*, and for Great Britain, 38,407,264 *l.*, or 19 times as much.

2d. That the total amount of deposits lodged in the public savings banks during the last 10 years is, for Ireland, 5,208,151 *l.*, and for Great Britain, 76,255,688 *l.*, or 14½ times as much.

3d. That the total amount of deposits in the post office savings banks, since their first establishment, amounts to 336,594 *l.* for Ireland, and to 7,957,170 *l.* for Great Britain, or 23½ times as much.

4th. That the amount of post office money orders issued in Ireland during the last 10 years amounts to 8,927,380 *l*, and in Great Britain to 123,172,981 *l.*, or nearly 14 times as much.

5th. That the gross receipts of railways during the year ending 31st December 1863 was, for Ireland, 1,518,654 *l.*, and for Great Britain, 29,557,511 *l.*, or 19½ times as much.

6th. That the yearly interest on Government stocks payable in Ireland amounts to 1,120,134 *l.*, and that payable in Great Britain to 21,612,527 *l.*, or 19 times as much.

App. 1865. 7th. That the amount of probate, legacy, and succession duty on an average of the last three years, amounts to 212,895 *l.* for Ireland, and to 3,452,667 *l.* for Great Britain, or more than 16 times as much.

Though it may be impossible exactly to ascertain the relative wealth of the two countries, your Committee think that it is clear, from the above figures and from other evidence, that the wealth of Great Britain is much more than seven and a half times as much as that of Ireland—the proportion fixed for the contributions of the two countries by the Treaty of Union.

Whilst these considerations point to the conclusion that the proportion of 2 to 15 in which Ireland was called on by the terms of the Treaty of Union to contribute to the joint expenditure of the two countries was too high, App. 1865. it appears that at no time from the Union to the present day has she actually contributed by taxation in that proportion. In the year 1863-4, the proportion of her gross ordinary revenue to that of Great Britain, though much higher than in earlier years, was only 9·51 to 90·49, instead of 11·76 to 88·23, as contemplated by the Treaty of Union; and even if credit were given to her for half a million of what is called uncredited revenue (that is, revenue raised in England, but virtually paid by Ireland), the proportion would fall far short of the Union standard. As regards her present ratio of ability, it will be seen that the tests applied at the time of the Union, namely, a comparison of the imports and exports, and of the consumption of exciseable articles, are no longer available. The returns of property and income assessed to the income tax would furnish a basis of comparison if the system adopted for charging the tax were the same in both countries; but this is not the case, and many allowances have to be made which disturb the accuracy of the calculation. According to the best estimate that can be made, it would seem that the proportion of Irish to British income returned to the income tax in 1863-4, was somewhere about 8 to 92. The proportionate amount derived from taxation of all kinds appears, therefore, to be higher than the proportionate income of the country as estimated from the returns to the income tax. In other words, taxes other than the income tax bear a higher ratio to the income of the country, and to the amount derived from its taxation, in Ireland than in Great Britain.

With regard to the income tax under Schedule (A.) in Ireland, it has not

not been proved to the Committee that the Irish taxpayer enjoys any important advantage in consequence of the tax being assessed upon the net Government valuation of lands and houses, instead of upon the gross rent, as in Great Britain.

The complaints which have been made by the several witnesses examined before your Committee are to the effect that Ireland has been suffering, especially during the last four or five years, from the diminution of capital, and the emigration both of labourers and of small capitalists. The losses she has thus sustained are attributed, so far as they can be traced to legislative measures at all, to the repeal of the Corn Laws and to the pressure of Imperial and local taxation. The remedies suggested are of various kinds. Some witnesses think that Ireland should be relieved of the Income Tax; others, that a greater proportion of the burdens now thrown upon local taxation should be borne by the Consolidated Fund: others, that a larger amount of public money should be expended upon dockyards, or other public works in Ireland; and others, that advances should be made upon more liberal terms than at present, for the promotion of drainage and other improvements.

That Ireland has been suffering during the last few years is not to be denied. It has not, however, been shown that this suffering has been owing to the pressure of taxation. It would rather appear that it has been owing to the extremely unfavourable character of the seasons, which for several years past have been remarkably inclement, and which have caused peculiar suffering to a country whose industry is almost wholly agricultural.

It has not been shown to your Committee that there is any tax now in operation in Ireland which materially interferes with the development of her industry, unless it be the excise duty on spirits, which, to a certain extent, checks distillation and prevents the profitable use of inferior grain. The complaints which have been made apply rather to the injury done by the withdrawal of capital by taxation than by the adjustment of the taxes, and that Ireland, being a poor country, suffers more from the withdrawal of capital from productive expenditure for the purposes of Government expenditure than Great Britain. Your Committee, however, desire to point out that if this is true of Ireland, it is true of the poorer parts of Great Britain. Indeed, it holds good, not only of poor districts, but of poor individuals. No system of taxation has ever been devised which presses equally upon all persons; and if it be recognised as a sound principle that we should attempt to graduate the taxation which we impose upon one part of the United Kingdom so as to relieve it of some burdens on the ground of its poverty, it will be impossible to resist the argument that we ought to carry the graduation further, for the purpose of relieving individual taxpayers on the same plea. There are parts of England and Scotland which might set up a case more or less similar to that of Ireland. Now, if Ireland were to be relieved of two or three millions of taxation on the ground of her poverty, and those two or three millions had to be made up by an addition to the taxation of Great Britain, the burdens of the poor districts of Great Britain would be increased for the purpose of diminishing the burdens, not only of the poorest but also of the richest districts of Ireland. Ev. 5332, 5333.

Your Committee do not look to an increase of public expenditure in Ireland as a desirable measure. On the contrary, while they admit that such expenditure might give a factitious appearance of prosperity to particular districts, they believe that, as it would involve an addition to taxation, it would upon the whole do more harm than good. In saying this, they refer to unproductive expenditure incurred for the purpose of distributing a large proportion of the public money in a particular quarter of the empire.

Your Committee hold that it would be a serious error to expend the money voted for national objects in any other way than that which appears to be best for the nation at large. If, for example, a naval arsenal is required, that arsenal should be constructed at the spot most suitable for it, and most advantageous for the nation, without reference to the question whether the expenditure upon it would be specially beneficial to one district or to another.

As regards what may be called reproductive expenditure, somewhat different considerations apply. It may be desirable to advance public money to pro-

mote the improvement of particular districts, in order to render those districts ultimately more capable of adding to the national wealth. A good deal has already been done in this way. Your Committee do not, however, see reason for objecting to this expenditure. On the contrary, they are of opinion that any measures which can safely be taken for furthering such advances will be desirable. It has been shown to your Committee, that there is no risk of loss to the country from advances under the Land Improvement and Drainage Acts.

App. 16, p. 418.

Your Committee have observed that the applications for loans under the Land Improvement Acts have fallen off from 643, amounting to 379,836 *l.* in 1849, to 138, amounting to 58,830 *l.* in 1863-64; and that the whole sum taken up during the last 10 years only amounts to the sum of 385,455 *l.*, or an average of 38,545 *l.* per annum. There have been also but 33 loans granted for labourers' dwellings under the Act. While so large a part of Ireland remains undrained, this result would seem to indicate that the conditions upon which these loans are granted are too onerous, and might with advantage be modified.

Your Committee desire to call attention to the evidence of Colonel M'Kerlie, the chairman of the Irish Board of Works, who states in answer to Questions 1034–1050, that while he thinks that arterial drainage, which he considers to be essential to the advancement of other improvements, is not proceeding as fast as is desirable, he thinks it is proceeding as fast as can be expected under the present state of the law, and recommends that, in order to encourage it, a larger proportion, or, as he afterwards says, the whole of the cost should be defrayed in the first instance by advances from the Government. Your Committee need not press this recommendation, as it has been already adopted and made the foundation of a Bill recently introduced into the House of Commons by Her Majesty's Government.

Your Committee recommend that extensive proprietors should be allowed advances for land improvement, drainage, and labourers' cottages, beyond the sum of 8,000 *l.*, which is now the fixed limit, in all cases, whatever may be the size of the estate. They also recommend that it should be made optional with the proprietor to borrow the money, under the arrangement at present in force, viz., by repayments at 6½ per cent. for 22 years; or by payments of 5 per cent. for such a number of years as will be necessary to repay the sum borrowed, with the same rate of interest as at present. Also, that when a loan is granted for a farm building, it should not be made a condition that the proprietor should provide a house at a cost of 200 *l.* There are many cases where a small farm building would be most useful, but where no house is required. Your Committee also recommend that the conditions attached to the erection of labourers' cottages should be re-considered.

Your Committee recommend that full periodical returns of local taxation in Ireland and Scotland should be laid before Parliament, as is provided in England by the Act of 1860.

Your Committee, in conclusion, call attention to a question which has arisen as to a grant of 5,000 *l.* a year, Irish currency, which was originally made for the encouragement of the Irish coast fisheries under the Act 59 Geo. 3, c. 109.

Letter from Irish Fishery Office, 17 July 1830, App. No. 4, p. 88. Letter of 4 Aug. 1830, App. No. 4, p. 89.

Some doubt appears to have existed in Ireland in 1830 as to the effect of subsequent legislation upon this grant; and the Commissioners of Irish Fisheries were directed by the Lord Lieutenant of Ireland, in the same year, to suspend all further proceedings with respect to that grant. It seems afterwards to have been considered that the grant was actually terminated, and no issue of money was subsequently made under it, although applications were from time to time made to the Commissioners of Public Works for aid towards the building and repairing of fishery piers, and for assistance to poor fishermen.

Whether the original grant of 5,000 *l.* a year is still in force, or capable of effect, appears to your Committee to be a legal question of no small importance, and possibly of some nicety. Your Committee strongly recommend that the question be submitted for the opinion of the legal advisers of the Crown.

1 *June* 1865.

PROCEEDINGS OF THE COMMITTEE.

Jovis, 23° *die Martii*, 1865.

Mr. Howes.	The O'Conor Don.
Colonel Dunne.	Mr. Lowe.
Sir Stafford Northcote.	Lord John Browne.
Mr. Hennessy.	

Colonel DUNNE called to the Chair.

The Committee deliberated.

[Adjourned to Monday next, at Twelve o'clock.

Lunæ, 27° *die Martii*, 1865.

MEMBERS PRESENT:

Colonel DUNNE in the Chair.

Mr. Longfield.	Mr. Hennessy.
Sir Stafford Northcote.	Mr. Finlay.
Mr. Hankey.	Mr. Lowe.
Lord John Browne.	Mr. Banks Stanhope.
The O'Conor Don.	

The Marquis of Clanricarde (attending by permission of the House of Lords), examined.

[Adjourned to Thursday next, at Twelve o'clock.

Jovis, 30° *die Martii*, 1865.

MEMBERS PRESENT:

Colonel DUNNE in the Chair.

Mr. Hankey.	Sir Stafford Northcote.
Mr. Howes.	Mr. Finlay.
Sir Edward Grogan.	Lord John Browne.
Sir Robert Peel.	Mr. Lowe.
The O'Conor Don.	Mr. Hennessy.
Sir Frederick Heygate.	

Mr. *Henry Barnes* and Mr. *Alexander Stewart* severally examined.

[Adjourned to Monday next, at Twelve o'clock.

Lunæ, 3° *die Aprilis*, 1865.

MEMBERS PRESENT:

Colonel DUNNE in the Chair.

Sir Stafford Northcote.	Lord John Browne.
Sir Edward Grogan.	Mr. Banks Stanhope.
Sir Robert Peel.	The O'Conor Don.
Mr. Hankey.	Mr. Finlay.

Colonel *M'Kerlie* examined.

[Adjourned to Thursday next, at Twelve o'clock.

Jovis, 6° *die Aprilis*, 1865.

MEMBERS PRESENT:

Colonel DUNNE in the Chair.

Mr. Hankey.	Lord John Browne.
Sir Robert Peel.	Sir Edward Grogan.
Sir Stafford Northcote.	

Mr. *Francis S. Leslie* examined.

The Committee deliberated.

Motion made, and Question, "That the Committee adjourn to Thursday, 27th April, to receive evidence as to the Fishery question, and that of a Treasury officer as to Local Taxation; and that at the next meeting after the 27th April, the Committee will proceed to consider its Report"—(The *Chairman*)—put, and agreed to.

[Adjourned to Thursday, 27th April, at Twelve o'clock.

Jovis, 27° *die Aprilis*, 1865.

MEMBERS PRESENT:

Colonel DUNNE in the Chair.

Mr. Howes.	Mr. Finlay.
Sir Stafford Northcote.	Mr. Hankey.
Mr. Longfield	Sir Frederick Heygate.
The O'Conor Don.	Sir Robert Peel.
Lord John Browne.	Mr. Lowe.

Mr. *H. W. Chisholm* examined.

Mr. *William Andrews* examined.—On a Question being asked as to the working of the Fishery Act of 1863, the Witness was ordered to withdraw.—The Committee deliberated.

Motion made, and Question, "That it is not relevant to the duties of this Committee to inquire into the working of the Fishery Act, 1863"—(Mr. *Longfield*)—put, and agreed to.

Mr. *William Andrews* called in, and further examined.

Mr. *James Redmond Barry* and Mr. *John Hoare* severally examined.

[Adjourned to Thursday, 11th May, at Twelve o'clock.

Jovis, 11° *die Maii*, 1865.

MEMBERS PRESENT:

Colonel DUNNE in the Chair.

Sir Stafford Northcote.	Mr. Lowe.
Lord John Browne.	Sir George Colthurst.
Sir Frederick Heygate.	Mr. Finlay.
The O'Conor Don.	Mr. Banks Stanhope.
Mr. Howes.	Mr. Hennessy.

The Committee deliberated.

[Adjourned to Thursday next, at Twelve o'clock.

Jovis, 18° *die Maii*, 1865.

MEMBERS PRESENT:

Colonel DUNNE in the Chair.

Sir Stafford Northcote.	Sir Frederick Heygate.
Mr. Howes.	Mr. Longfield.
Mr. Banks Stanhope.	Sir Robert Peel.
Mr. Lowe.	Sir George Colthurst.
Lord John Browne.	Mr. Hankey.
The O'Conor Don.	

Draft Report proposed by the *Chairman*, read 1°, as follows:

"YOUR COMMITTEE, appointed to consider the Subject of the Taxation of Ireland, 'How 'far it is in accordance with the Provisions of the Treaty of Union, or just in reference 'to the resources of that Country,' submit the following REPORT:

"1. THE Order of Reference prescribes two subjects of consideration, and your Committee has received evidence on both; the first refers more particularly to the period of 16 years, from January 1801, when the Act of Union came into operation, to January 1817, when an Act was passed, consolidating the two Exchequers. The second subject refers, in addition to the period extending from the passing of that Act, to the present time.

"2. The Act of Union, passed on the 2d of July 1800, was founded on resolutions which had been previously adopted by the British Houses of Parliament, and subsequently, but not without protest and reluctance, carried by a majority in the Parliament of Ireland. These resolutions, which were incorporated in the English and Irish Acts of Union, set forth as in a solemn treaty, the future relations between the two countries, and formed the guarantee of the rights and privileges reserved to each. They are expressed in articles as usual in treaties, and in a paragraph succeeding the 8th Article, it is thus emphatically stated:

"'That the foregoing recited Articles, each and every one of them, according to the 'true tenor thereof, be certified, confirmed, and approved, and be, and they are hereby 'declared to be, the Articles of the Union of Great Britain and Ireland, and the same 'shall be in force, and have effect for ever.' After giving its assent to this treaty, taking effect from 1st January 1801, the Irish Parliament ceased to exist, and with it one of the parties which possessed the right of making this international compact. Notwithstanding the declaration just recited, Sir Colman O'Loghlen has in his evidence stated, that it is his opinion that the provisions of the Act of Union may be altered or repealed like those of any other Act of Parliament. 137. 138. 142. 143.

"3. Mr. Dillon scarcely recognises this power of breaking the international contract by a majority of Englishmen; and the Right Honourable J. Napier, the late Chancellor of Ireland, considers that upsetting the 'Act of Union would involve dismembering the 'Empire;' that it is a fundamental law, possibly greater than Magna Charta, and without it the weaker state would have no protection, and, in fact, that its repeal is equivalent to revolution, and the repeal of any of its provisions contrary to the powers of the present Parliament. But without discussing this important subject, nor even whether an infraction of the provisions of the treaty by one of the contracting parties may not effect what the United Parliament cannot do, according to the opinion of the Right Honourable Joseph Napier, it seems to your Committee to be incontrovertible that as long as the Treaty of Union exists, neither of the two countries can claim the advantages of any 1251. 3592. 3593. 3594. 3595.

particular article for its own advantage, and reject others which it may consider less favourable to its interests. The Treaty of Union (it is not denied) still exists; it has not been repealed, and as long as it does, it forms the guarantee for the national rights of both kingdoms.

"4. By the 7th Article of the Treaty of Union, the details of the financial arrangements between the two countries were laid down, and it therefore has immediate reference to the subjects of inquiry entrusted to your Committee. For sake of reference it has been divided into paragraphs or sentences, which are numbered, and is as follows:

Interest and Sinking Fund of either Kingdom defrayed separately.

(1.) "'That it be the Seventh Article of Union, that the charge arising from the payment of the interest and the sinking fund for the reduction of the principal of the debt incurred in either Kingdom before the Union, shall continue to be separately defrayed by Great Britain and Ireland respectively, except as hereinafter provided:

How expenditure of United Kingdom defrayed and provided for.

(2.) "'That, for the space of 20 years after the Union shall take place, the contribution of Great Britain and Ireland respectively, towards the expenditure of the United Kingdom in each year, shall be defrayed in the proportion of 15 parts for Great Britain and two parts for Ireland.

(3.) "'And that at the expiration of the said 20 years, the future expenditure of the United Kingdom (other than the interest and charges of the debt to which either country shall be separately liable) shall be defrayed in such proportion as the Parliament of the United Kingdom shall deem just and reasonable upon a comparison of the real value of the exports and imports of the respective countries, upon an average of the three years next preceding the period of revision; or on a comparison of the value of the quantities of the following articles consumed within the respective countries, on a similar average, videlicet, beer, spirits, sugar, wine, tea, tobacco, and malt; or according to the aggregate proportion resulting from both these considerations combined; or on a comparison of the amount of income in each country, estimated from the produce for the same period of a general tax, if such shall have been imposed on the same descriptions of income in both countries: and that the Parliament of the United Kingdom shall afterwards proceed in like manner to revise and fix the said proportions according to the same rules or any of them, at periods not more distant than 20 years, nor less than seven years from each other; unless, previous to any such period, the Parliament of the United Kingdom shall have declared, as hereinafter provided, that the expenditure of the United Kingdom shall be defrayed indiscriminately, by equal taxes imposed on the like articles in both countries:

Consolidated Fund.

(4.) "'That, for the defraying the said expenditure according to the rules above laid down, the revenues of Ireland shall hereafter constitute a Consolidated Fund, which shall be charged, in the first instance, with the interest of the debt of Ireland, and with the sinking fund, applicable to the reduction of the said debt, and the remainder shall be applicable towards defraying the proportion of the expenditure of the United Kingdom, to which Ireland may be liable in each year:

Proviso.

(5.) "'That the proportion of contribution to which Great Britain and Ireland will be liable shall be raised by such taxes in each country respectively as the Parliament of the United Kingdom shall from time to time deem fit: Provided always, that in regulating the taxes in each country, by which their respective proportions shall be levied, no article in Ireland shall be made liable to any new or additional duty, by which the whole amount of duty payable thereon would exceed the amount which will be thereafter payable in England on the like article:

(6.) "'That, if at the end of any year any surplus shall accrue from the revenues of Ireland, after defraying the interest, sinking fund, and proportional contributions and separate charges to which the said country shall then be liable, taxes shall be taken off to the amount of such surplus, or the surplus shall be applied to the Parliament of the United Kingdom to local purposes in Ireland, or to make good any deficiency which may arise in the revenues of Ireland in time of peace, or be invested by the Commissioners of the National Debt of Ireland in the Funds, to accumulate for the benefit of Ireland, at compound interest, in ease of the contribution of Ireland in time of war; provided that the surplus so to accumulate shall at no future period be suffered to exceed the sum of 5,000,000 *l.*:

(7.) "'That all moneys to be raised after the Union by loan, in peace or war, for the service of the United Kingdom by the Parliament thereof, shall be considered to be a joint debt, and the charges thereof shall be borne by the respective countries, in the proportion of their respective contributions; provided that if, at any time, in raising their respective contributions hereby fixed for each country, the Parliament of the United Kingdom shall judge it fit to raise a greater proportion of such respective contributions in one country within the year than in the other, or to set apart a greater proportion of sinking fund for the liquidation of the whole or any part of the loan raised on account of the one country than of that raised on account of the other country, then such part of the said loan, for the liquidation of which different provisions shall have been made for the respective countries, shall be kept distinct, and shall be borne by each separately, and only that part of the said loan be deemed joint and common, for the reduction of which the respective countries shall have made provision in the proportion of their respective contributions:

(8.) "'That if at any future day the separate debt of each country respectively shall have been liquidated, or, if the values of their respective debts (estimated according to the amount of the interest and annuities attending the same, and of the sinking fund applicable

applicable to the reduction thereof, and to the period within which the whole capital of such debt shall appear to be redeemable by such sinking fund) shall be to each other in the same proportion with the respective contributions of each country respectively; or if the amount by which the value of the larger of such debts shall vary from such proportion shall not exceed one hundredth part of the said value; and if it shall appear to the Parliament of the United Kingdom, that the respective circumstances of the two countries will thenceforth admit of their contributing indiscriminately, by equal taxes imposed on the same articles in each, to the future expenditure of the United Kingdom, it shall be competent to the Parliament of the United Kingdom to declare that all future expense thenceforth to be incurred, together with the interest and charges of all joint debts contracted previous to such declaration, shall be so defrayed indiscriminately by equal taxes imposed on the same articles in each country, and thenceforth from time to time, as circumstances may require, to impose and apply such taxes accordingly, subject only to such particular exemptions or abatements in Ireland, and in that part of Great Britain called Scotland, as circumstances may appear from time to time to demand:

(9.) "'That, from the period of such declaration, it shall no longer be necessary to regulate the contribution of the two countries towards the future expenditure of the United Kingdom, according to any specific proportion, or according to any of the rules hereinbefore prescribed: Provided nevertheless, that the interest or charges which may remain on account of any part of the separate debt with which either country shall be chargeable, and which shall not be liquidated or consolidated proportionably as above, shall, until extinguished, continue to be defrayed by separate taxes in each country: That a sum, not less than the sum which has been granted by the Parliament of Ireland on the average of six years, immediately preceding the 1st day of January in the year 1800, in premiums for the internal encouragement of agriculture or manufactures, or for the maintaining institutions for pious and charitable purposes, shall be applied, for the period of 20 years after the Union, to such local purposes in Ireland, in such manner as the Parliament of the United Kingdom shall direct: That, from and after the 1st day of January 1801, all public revenue arising to the United Kingdom from the territorial dependencies thereof, and applied to the general expenditure of the United Kingdom, shall be so applied in the proportions of the respective contributions of the two countries.' Proviso.

"5. It will be seen that the first section of this Article provides, 'That the payment 'of the interest and of the sinking fund for the reduction of the debts already incurred in 'either country, shall continue to be separately defrayed by Great Britain and Ireland, 'except as hereinafter provided;' and there can be no doubt that until the contingency to which this proviso alluded arrived, one country was not to be held responsible for the debt or sinking fund for which the other was liable in respect to debt incurred before their Union. Sir Colman O'Loghlen, Mr. Dillon, and the Right Honourable Joseph Napier, all concur in this construction of the first paragraph of the 7th Article of the Union. 5. 113. 689. 1165.

"The second section lays down the proportion of contributions to the joint expenditure from each country which was adopted by Lord Castlereagh, and carried by a majority, in spite of the protests and remonstrances of a large proportion of the Lords and Commons and of the Irish people. It was also determined that this proportion of contribution should be continued for 20 years, and at the termination of that period a new proportion should be fixed on a just and reasonable comparison of certain articles of consumption within the respective countries, or on the estimated produce of a general tax imposed on the same description of income in each country. Revisions were subsequently to be made at intervals of not more than twenty years nor less than seven.

"The fourth section constitutes a consolidated fund for Ireland, and states that this fund shall first be charged with the interest of the debt of Ireland, and the remainder be applied to defraying the debt to which Ireland may be liable in each year.

"By the fifth section it is provided that no article shall be taxed in Ireland at a higher rate than the same article is taxed in England. In the year 1823 it was found that this provision of the 7th Article of the Union had been violated; and in a Committee of the whole House the Act was formally read, and it was voted that directions should be given to the Lords of the Treasury to reduce the Irish duties, in accordance with its provisions. This fact is of importance, as it shows that the Imperial Parliament, even after the consolidation of the Exchequers, recognised as binding the provisions of the Act of Union with respect to the financial transactions of the two countries. See Act of Parliament, January Journals, 1863.

"The seventh and eighth sections of the 7th Article of the Union, afford the interpretation of the manner in which the accounts of each country with relation to the other should be kept, and have engaged the earnest attention of your Committee. The former directs that 'all loans to be raised after the Union for peace or war shall be considered as a joint 'debt;' 'and the charges thereon' (that is, interest, sinking fund, and management) 'shall 'be borne in the proportion of the contributions to which each country is liable.' From this it is contended, that loans so raised could not be added to the debts contracted before the Union by either country; and this view is strengthened by the provision following, which permits the Parliament, when united, to raise a larger proportion of their contributions by loan for one country than the other, making each loan a separate charge to the country for which it is levied; 'that part of the loan only to be considered joint for 'which they have contributed in their respective proportions.' Thus, if either country might supply its proportion, either by taxation or loan, but any loan raised, not to supply the deficiency of the produce of taxation to its contribution, but for the special objects of either country, was to be considered a separate loan.

31 to 35.

"This section has appeared ambiguous to Sir Colman O'Loghlen, Mr. Dillon, and the Right Honourable J. Napier, who take different views of its interpretation. Sir Colman O'Loghlen considers that no addition could be made to the Pre-Union debts, and that the separate Pre-Union debt of Ireland could not be increased, and must continue separate until liquidated or consolidated when reduced according to the proportions laid down in the eighth section. Mr. Dillon, with more hesitation, adopts the same view. Mr. Napier seems to take a different one, and considers that an addition to the separate debt of either country might be made, and that loans made to supply the deficit to the proportion of contribution for which each was liable should be considered a separate debt.

3591–3628.

"The eighth section states, that when the debts of the two countries are in the proportions of their respective contributions, 'and if it shall appear to the Parliament of the 'United Kingdom that the respective circumstances of the two countries shall admit of 'their contributing indiscriminately by equal taxes imposed on the same articles in each,' it shall be lawful for the Imperial Parliament to make a declaration to that effect and impose taxes accordingly, 'subject only to such exemptions or abatements in Ireland, and 'that part of Great Britain called Scotland, as circumstances may from time to time seem 'to demand.'

"6. In the year 1817, the consolidation of the Exchequers of the two countries was effected, but this consolidation merely deals with the disposal of the taxes when collected, and had nothing to do with altering the proportions of contribution; and although Committees which sat in the years 1811, 1812, and 1815, to examine the international accounts resolved that (according to the way in which they stated the international accounts) the proportions of the respective contributions had, by the increase of Irish debt, even passed the proportion which warranted a declaration of indiscriminate taxation, yet no such declaration was ever made; and so far from considering the circumstance of the two countries suitable to it, as required by this 7th Article of the Act of Union, it never has, to this hour, imposed on Ireland indiscriminate taxation with Great Britain. Although the 8th Article directs that in cases of this declaration of indiscriminate taxation being made, all interest and charges on joint debts shall be indiscriminately paid, yet the 9th Article recognised a separate debt, even after such a declaration, and directs that such part of the separate debt as shall remain chargeable to either country shall not be liquidated or consolidated proportionately, as above, but continue, 'until extinguished,' to be defrayed by separate taxes in each country; which clearly shows that whether the Pre-Union debts of each country could be increased or not, at least there were (even after a declaration of indiscriminate taxation, had such declaration even taken place) charges which the Act recognised as remaining separate charges on each country. This power seems to have been totally overlooked. This section ends by declaring that, from the 1st of January 1801, all public revenue arising to the United Kingdom from the Territorial Dependencies thereof, and applied to the general expenditure of the United Kingdom, shall be so applied in the proportions of the respective contributions of the two countries; yet your Committee does not find any credit given to Ireland for such sums in the accounts laid before it.

Mr. Chisholm, Appendix, 1865.

See Revenue Act, Mr. Chisholm, 6467.

6467.

"7. It is not considered within the Order of Reference for your Committee to discuss the grounds which (before the Union) induced the Government of Ireland to assent to a proportion of 15 to two to Imperial taxation, being that of the contributions of Great Britain and Ireland, nor the grounds of the objections so strongly urged against it, for experience very soon proved, even to those who imposed it on Ireland, that her resources were unequal to it. Scarcely a statesman of the day failed to point out that Ireland was unable to bear the burden which the proportions of a contribution of 2-17ths of the expenses and extravagancies of the war in which Great Britain was then engaged involved her, and yet Lord Castlereagh, when recommending to the Irish House of Commons, had held out the inducement of an alleviation of taxation to Ireland. It is one he is stated to have said, which by establishing a fair proportion of contribution between the two countries, tends to relieve Ireland from an expense of 1,000,000 *l.* in time of war, and of 800,000 *l.* in time of peace; yet so far from these hopes being realised, it turned out that the annual taxation of Ireland, which had before the Union scarcely exceeded 3,000,000 *l.* had increased in 1816 to 7,681,324 *l.*, and her debt which, at the time of the Union, had been (according to Mr. Chisholm) funded and unfunded 29.275,692 *l.*, had, with the additions to the post-Union debt, reached a sum in 1816, of 113,109,764 *l.*, according to the same authority.

Paper, 15 April 1864, pages 6, 7. Report 1815 Appendix A., pages 16 to 18.

"8. In the year 1814, the Imperial expenditure amounted to 117,812,837 *l.*, Ireland's proportion to 17,057,636 *l.*; while her income, strained to the utmost, did not supply more than 6,805,514 *l.* The injustice of the taxation imposed on Ireland was now admitted. Mr. Corry, the Irish Chancellor of the Exchequer, declared that Ireland was neither able to bear the burdens of Great Britain, nor was she called upon to do so. Sir John Newport, Sir Henry Parnell, every statesman of the time, made the same admission; and even Lord Castlereagh declared, that if the burdens of Ireland were not co-extensive with those of Great Britain, it was not just to call on her to bear the same system of taxation.

Appendix 10, pages 3, 4, 5. Report 1815, page 4.

"9. As might therefore have been expected, Ireland was unable by taxation to meet the amount for which she was made liable, and accordingly recourse was had to loans to make up the deficiency. Neither was Great Britain able to supply her contribution by revenue; but the different effect on the two countries was this, that the loans borrowed for Great Britain were all raised in that country, while Ireland, being a poor country, could

could not supply capital for the purpose, and had to borrow to the amount of 56,350,000 *l.*, creating 80,282,875 *l.* stock, and in 60,720 annuities in England, where loans were raised for both countries, and the portion required assigned to Ireland to make up her deficits. Thus was Ireland further impoverished, not only by borrowing sums to be spent on objects of little interest to herself and beyond her territory, but also lost the advantages obtained by the lenders in England, who gained not only the interest on the loans, but the difference between the money they actually advanced by them and the stock created, which amounted to 23,932,875 *l.*

" 10. A statement of the accounts of the receipts and expenditure between the two countries appears for some time to have received but little attention. In 1805 Mr. Pitt yielded to the reiterated demands of the Irish Members, and promised a Committee on the subject, but he retired from office, and shortly after died, and they did not obtain one until the year 1811, when a Committee, of which the then Chancellor of the Exchequer was Chairman, sat. This Committee was followed by two others, in the years 1812 and 1815.

" 11. In the Report of the Committee in 1811, it is stated that no account had hitherto been kept in Ireland, similar to those annually kept in Great Britain, of the additions made to the annual charge of the debt, and declares itself 'as little able to give an account 'which would serve for a definitive settlement between Great Britain and Ireland.' However, it pursued the inquiry; and the Committee of 1815, while stating that any strict interpretation of the 7th Article of the Union was attended with considerable difficulty, yet recommended the declaration of indiscriminate taxation in Great Britain and Ireland as the amount of the separate debts of the two countries had passed the proportion which they contended authorised the Imperial Parliament to make such declaration. Report of Commissioners, 1811, page 9.

" This Committee states that 'Ireland had advanced in permanent taxation more rapidly 'than Great Britain,' that the permanent revenue of the latter country had increased since 1801 in the ratio of 16¼ to 10; and the whole revenue, including the war taxes, in the proportion of 21 to 10; while in the same period the revenue of Ireland had increased in that of 23 to 10, and in the 24 preceding years in the proportion of 40 ¾ to 10. It asserts 'that no practical benefit can be obtained by endeavouring to maintain a fixed proportion 'of expenditure which has changed the debt of Ireland from a state of inferiority to a 'rapidly growing excess, and cannot be met by any system of permanent taxation which 'would not violate the most solemn engagements.'

" 12. It would seem that the easiest way to have remedied these evils would have been to have anticipated the prescribed period, and to have lowered the proportion of Ireland's contribution from the unjust amount (forced on her by the Act of Union) to one which could be met by her resources, but this was not done. An Act passed for the consolidation of the two Exchequers for which the Act of Union had made no provision, and might have been effected at any time, By this Act the Pre-Union debts of both countries were consolidated, which it has been urged was (as stated above) contrary to the Act of Union.

" 13. It is not easy to see what advantage Ireland, the poorer country, obtained by this consolidation which imposed on her the additional liability of the separate debt of England, amounting to 682,520,033 *l.* according to Mr. Chisholm; the reciprocal responsibility which Great Britain undertook of the Irish separate debt, according to the same authority, amounting in 1801 only to 113,680,158 *l.*, nor what she could gain by indiscriminate taxation with that country, when she could not pay the taxes already imposed. The Committee of 1815, however, seemed aware of what the effect of indiscriminate taxation might be, and therefore called the attention of the House of Commons to the proviso in the Act of Union, that in imposing equal taxation, they were empowered to do so 'subject 'to such particular exemptions or abatements in Ireland,' and Scotland, 'as circumstances 'may from time to time appear to demand.' App. 12, 1864, page 402.

" 14. The principle on which the Committees made their calculations on the proportions of the separate debts will be found in their Reports and Appendices. They are based on a construction of the 7th Article of the Act of Union, the interpretation of which is 'attended with considerable difficulty,' an interpretation not admitted in Ireland at the present moment, as will be seen by the evidence before your Committee; and if, as is there contended, the article of the Treaty of Union rendered it imperative to keep the Pre-Union debt of each country separate, as directed not only by the 1st section (notwithstanding the proviso), and confirmed by the 4th and 9th sections of the Article, these calculations are incorrect, as also are those subsequently made on the same basis. Reports of the Committee on Expenditure and Income, Ireland, 1811, 1812, and 1815. Report of Committee on Expenditure and Income, Ireland, page 11, 1815.

" 15. Mr. Fisher has made numerous calculations, which will be found in the Appendix to this Report, in which he asserts that a much larger sum is charged to Ireland than she was liable by the Treaty to pay. On the other hand, Mr. Anderson, of the Treasury, and Mr. Chisholm, of the Exchequer, have, with great pains and ability, made researches into old accounts, and in those presented by Mr. Chisholm to your Committee, he differs from Mr. Fisher's conclusions; but both must admit, as do the Committees of 1811 and 1812, that in the first years after the Union the accounts were not kept, or, at least, were not so accurately kept that they afford means of subsequently obtaining them in a completely reliable form. It is clear, however, that the Irish revenue has, in all accounts, been understated; for by the concluding paragraph of the 9th section of the 7th Article of the Union, Ireland was entitled to her proportion of the 'public revenue arising from the

'territorial dependencies of the United Kingdom, and she was also entitled to a proportion 'of revenue arising from miscellaneous receipts, and they were never credited to her in their 'accounts.'

"16. From want of official documents it may, however, be difficult to estimate the sums uncredited to Ireland at a precise amount; but whatever they may be, and no one can doubt, they must derange the accounts furnished, into which they do not enter. Even taking the most moderate sums, if added to the Irish revenue, and taken from the British, it will naturally alter the proportions of their debts, not only in the period of 16 years, from the Union to the consolidation of the Exchequers, but (as we shall see) to a much larger extent in the period from 1823 to the present day.

"17. It must also be observed that a loan of 4,500,000 *l.*, raised in 1811, and another in 1814 of 5,500,000 *l.*, contained in the accounts presented, were never assigned by Act of Parliament to Ireland, and should further be deducted from her debt; for it can scarcely be supposed that the omission of charging them to her was not intentionally made, on account of her inability to repay it or raise a further loan.

"While submitting the accounts which were laid before your Committee to the House, without coming to a conclusion that any of them are entirely to be relied on as perfectly authentic, it at least must be admitted that they were not kept in accordance with the provisions of the Treaty of Union; and that credits to which Ireland was as much entitled as any other part of her revenue have not been given to her, which materially alters the debt attributed to her. Should it be contended, however, that the Act of Union gave, for 20 years, the right of exacting from Ireland 2-17ths of the Imperial expenditure, the testimony of all the leading statesmen of the day, and the state of the country, show that proportion to have been unjust.

Appendix, 18. ii. page 421.

"18. This view is further strengthened by more modern authorities. In the Appendix will be found a memorandum of Mr. J. Smith, of the Irish Exchequer Office, written in 1816, in which it is stated 'that 15-17ths for Great Britain and 2-17ths for Ireland was 'not a fair proportion in reference to the relative ability of each country.' And again, he states, 'Taking the whole expenditure from the Union, it is clear that Ireland has con-'tributed to the expenses of the Empire much more than was contemplated by those who 'framed the proportions at the time of the Union.' From which it may reasonably be inferred that the taxation imposed was not even in accordance with the spirit of its provisions. Mr. Chisholm is equally explicit. He states that in 1815 the increase of her 'net produce 'from taxation was no less than 128 per cent., being a greater ratio of increase than Appendix, 1865. 'Great Britain produced in any year; 'yet this increased revenue, as compared with her 'expenditure, was no more than 38·6 per cent.'

"19. He further gives extracts from speeches and letters of Mr. Corry, Mr. Leslie Forster, Lord Fitzgerald, Mr. Gregory, and the late Sir Robert Peel, showing the poverty of the country, and inability to raise loans in Ireland in 1815; and concludes Appendix, 1865. 'that with such evidence it appears impossible to reconcile the ability of Ireland to con-'tribute 2-17ths, or 11·765 per cent. to the Imperial expenditure,' with the ascertained fact of her inability to contribute from her own resources more than 4 *l.* 5 *s.* per cent. of the money required to be raised by creation of debt to provide for the largely increased war expenditure during the 16 years from 1801 to 1816.

"20. Your Committee, therefore, cannot entertain a doubt that during this period the taxation of Ireland was not in accordance with the provisions of the Treaty of Union nor just in reference to the resources of the country, and so far replies to the inquiries referred to it.

"21. It has been asserted that Ireland added so largely to her debt because the Government did not raise sufficient, or all that might have been raised, to meet her liabilities by taxation; but the evidence of the Committees of 1811–12 and 1815 show how unfounded is this assertion.

"22. The Committee which sat in 1811 declared, as has been stated, 'that Ireland had 'advanced in permanent taxation more rapidly than Great Britain herself, notwithstand-'ing the immense exertions of the latter country, even including her extraordinary war 'taxes; the permanent taxation of Great Britain having increased from 1801 to 1811 in 'the proportion of 16¼ to 10, and the whole revenue, including the war taxes, as 21¼ 'to 10; while the revenue of Ireland had in the same time increased in the proportion of '23 to 10; and, as it appears, that in the last 24 years its increase was in the proportion of '46¾ to one.'

"23. It, therefore, cannot be said, that she could have raised a larger amount by taxation; in fact, the attempt failed, and political economists urged this failure as a proof of the folly of over taxation.

"24. The consolidation of the Treasuries took place a short time before the period when a revision of the proportion of taxation might be made, and at the termination of the war with France, when a remission of taxation might be expected in both countries. Accordingly, in England, the war taxes, which were not enforced in Ireland, were remitted, and further remissions of English taxation were made between 1816 and 1864, to the amount of 72,479,850 *l.*, and in Ireland, of 5,488,979 *l.*; in the latter was included the Paper No. 110, 1865. assessed taxes, which Lord Ripon stated did not repay the cost of collection. In the same period,.

period, however, it appears that taxes were reimposed in England to the amount of 35,589,839 *l.*, and in Ireland, of 4,981,023 *l.*, leaving the balance of remission in the former country 36,610,011 *l.*, and in the latter but of 507,956 *l.*; and it will be found that Mr. Chisholm states that in the period between 1817–18 and 1862–63, English taxation had increased 19·8 per cent., and the Irish 28 per cent.; and in the period between 1852–53 and 1861–62, English had increased 17 per cent. and Irish 52 per cent. He also states that the proportion of the remission of taxation was from 1816 to 1864, inclusive, Great Britain 93 per cent. and Ireland but 7 per cent. App. 6, 1864, p. 12. App. No. 15, 1864, p. 413. App. 1865.

"25. In order to ascertain how far the taxation of Ireland is (at present) just in reference to the resources of the country, it will be necessary to state how it has advanced in prosperity and wealth, since the Union, not only positively but also comparatively, with England; and for this purpose it was necessary to examine into the different sources of wealth in each country. As to commerce, we submit the following Return, which shows the progress both in Great Britain and Ireland from 1801 to 1863, in their trade with foreign countries.

	1800.		1863.	
	Imports.	Exports.	Imports.	Exports.
	£.	£.	£.	£.
From Foreign Countries to Great Britain - - - - -	30,570,605	38,120,120	223,251,650	174,022,479
From Foreign Countries to Ireland -	753,855	306,501	6,777,984	193,788

Return, 420, 1864. Select Committee Report, 1815, page 8.

"26. Thus it will be seen, that while the foreign commerce of Great Britain has increased in an enormous ratio, the foreign commerce of Ireland has actually fallen off.

"27. The trade between England and Ireland has doubtless increased since the Union; in 1801 it was estimated at 3,920,928 *l.*, and in 1821 at upwards of 11,000,000 *l.*; but since the year 1825 no accounts have been kept which could enable your Committee to estimate its present extent. Report of Select Committee, 1815, page 8. Thom.

"28. The witnesses examined before your Committee, have all agreed in the diminution of every kind of manufacture in Ireland, with the exception of the linen trade, which has undoubtedly improved. The Report of the Inspectors of Factories confirms the statements of the witnesses. Mr. Baker states that the cotton trade had totally disappeared from six counties, and not a mill had been built since 1839. In that year there were 24 mills, employing 4,612 persons. In 1862 there were nine mills, which employed but 2,732 persons. The woollen trade was equally depressed; in 1839, 1,231 persons were employed in it. In 1862 there were but 862; and in the worsted trade but 106. The silk trade in Dublin had also fallen off; and it can scarcely be said that since the Union any improvement has taken place.

"29. The fisheries of Ireland in 1848 had given employment to 15,932 boats and 70,011 men, but in 1862 they were reduced to 11,375 boats and 48,601 men.

The circulation of the Irish banks had in 1857 been 6,870,238 *l.*, it had in 1862 decreased to 5,638,352 *l.*, and in 1864, 5,872,706 *l.* Thom's Almanack.

"30. The loan funds had in 1846 a capital of 408,842 *l.*, and a circulation, 1,770,397 *l.* In 1862 the capital was 185,980 *l.*, and the circulation, 717,460 *l.* In 1864 it was, capital 167,669 *l.*, and circulation, 636,331 *l.* Thom's Almanack.

"31. In 1859 Ireland] manufactured 8,292,461 lbs. of paper. In 1860, but 9,314,985 lbs., and now this quantity is reduced.

"32. The deposits in the savings banks, which in 1845 were 2,921,581 *l.*, were in 1862 reduced to 2,153,211 *l.*; and in 1863, 2,071,523 *l.*

"33. In the years from 1841 to 1846, the stock transmitted from England to Ireland was 7,311,741 *l.*, while to England was returned 2.370,040 *l.*, leaving a balance in favour of Ireland of 4,940,901 *l.*; while, since 1859, the balance has been against Ireland; in 1861 it amounted to 1,039,301 *l.*, and has ever since continued largely against her.

"34. Without further pursuing these details, your Committee refers to your consideration the evidence given of the decline in Ireland of almost all kinds of commercial and manufacturing property, and submit that it clearly shows that Ireland has become less able to bear excessive taxation.

"35. Your Committee will now proceed to state the result of its investigations into the prosperity of agriculture in Ireland, and how far it may have compensated for the depreciation of commercial prosperity.

"36. Before the Union, Ireland was a grazing country, and large tracts were devoted to the production of cattle; but shortly before and even after that event, it became the policy of the British Government to encourage tillage farming in Ireland; and from the

advantages given to that country over others by the war, which ended in 1815, and subsequently by the Corn Laws, until repealed, she possessed the chief supply of the foreign market; and, notwithstanding occasional depressions, made considerable advances, both in wealth and population, to the year 1846, when the Corn Laws were repealed.

"37. It may be considered that at the period immediately preceding the year 1847, Ireland had reached the highest point of prosperity since the Union; at that period her gross revenue is stated to have been 4,119,184 *l.*, and her population had reached 8,475,139. Her agricultural produce and stock found a ready market in Liverpool, and a large proportion of wealth arising from that stock was diffused among the middle and lower classes of farmers. The Census Commissioners state that one-fourth of the value of the live stock of Ireland, amounting to a sum of 4,771,494 *l.*, was owned by those holding farms of less than five acres, and it has been calculated that the exports of grain could not be less in value than from 4,000,000 *l.* to 5,000,000 *l.* annually. But in 1847, it pleased Providence to inflict on Ireland one of the severest judgments that has befallen a nation, by the destruction of the staple food of the people. The loss sustained by the potato crop in that year was valued at more than 20,000,000 *l.*, nor was the disease for some years greatly mitigated, and instead of exporting food, Ireland has since been obliged to draw her own supplies from abroad. In 1846, the Corn Laws were repealed, and since then the corn which Ireland has yearly produced, has, from the competition of foreign countries, become scarcely remunerative, and instead of exporting cereals to the value of 4,000,000 *l.*, she has imported them to the amount of 5,000,000 *l.*, the payment for which must be chiefly raised from capital.

Thom's Almanack.

"38. The effect of the depressed state of agriculture, consequent on low prices, induced proprietors to turn their attention to stock farming, which can only be successfully carried on in farms of considerable extent; but the class of small farmers were unable to hold their lands under these altered circumstances.

"39. It was asserted that when the culture on the land became unprofitable, the Irish farmer would turn his labour and capital to the rearing of stock; the result has not justified this opinion, while the destructive effects of this change on the labouring classes are obvious, as has been proved by the evidence of all the witnesses examined before your Committee. The bad harvests of the last few years have added to the depression of the prosperity in Ireland, which seems to extend to all classes and all kinds of industry, except that of the linen manufacture. The evidence of the Registrar General has shown the diminution in the value of live stock, between the years 1859 and 1862, to have amounted to 4,163,934 *l.*; and the estimated value of crops, which in 1841 was 50,000,000 *l.*, has fallen in 1851 to 43,000,000 *l.*, and to 35,000,000 *l.* in 1861. The agricultural returns will further show the diminution in the value of every other kind of agricultural property since 1847, nor have any new manufactures arisen in Ireland to compensate these losses.

"40. Nor must it be forgotten that stock farming requires but small amount of labour, and consequently it will appear from the evidence that the demand for labour and wages has, but only at certain times, increased in Ireland, and the conditions of the labouring classes is little improved, notwithstanding the reduction of the number of that class. In England the agricultural labourer, when he ceases to find employment in the fields, may turn to that of manufacture; in Ireland there is none, and he has no other resource but (if he can ever do that) to emigrate.

"41. The witnesses examined before your Committee have suggested various reasons for the diminution of the wealth and prosperity of Ireland, and the deteriorated condition of her people; but all have agreed that want of capital is the principal impediment to improvement.

"42. In examining into the subject of this want of capital in Ireland, and into the reasons why, during a period in which Great Britain has increased so enormously in commerce, manufacture, and wealth, Ireland has made so little progress in either, although governed by the same laws and united (it might be supposed) by the same interests, the following considerations have been presented to it.

"43. It is asserted that a continual drain of wealth produced in the country is annually going from it, which reduces the resources of the country by removing from it that capital which might, as in England, be applied in reproductive objects, and in giving remunerative employment to the people.

"44. It can hardly be disputed that in times gone by the jealousy of the English manufacturers induced the British Government, by legal enactments, to check or destroy such manufactures, the prosperity of which might, in Ireland, rival them; and although such a policy has been abandoned, yet they have never to this day been able to recover the prosperity which once attended them in Ireland.

"45. It is stated that another drain of about 4,000,000 *l.* is annually drawn from Ireland from the revenue raised in that country, and that the expenditure within it is not commensurate with the amount raised from it; and that this withdrawal of capital which returns, but in no force, gradually renders the country poorer and poorer.

"46. In England, large as the amount of revenue now raised in the country, say 61,000,000 *l.* to 60,000,000 *l.*, the whole of it, with the exception of 10,000,000 *l.* or 9,000,000 *l.*, is spent within the kingdom, and does not diminish the general wealth; but in

in Ireland there is none of the Imperial expenditure for great public works to diffuse employment and re-distribute wealth among the labouring classes; and the transfer of revenue from it to another country is rather like a tribute paid to a foreign kingdom than of revenue collected for domestic purposes. Of the 5,000,000 *l.* raised for fortifications, and to which Ireland contributes but a small sum, to be expended for her defence, while those raised during the French war are falling to decay.

"47. An additional drain is caused by those who, possessing property in the country, are yet led by inclination or official duty to live out of it. From the earliest period of the connection between England and Ireland absenteeism has been recognised as one of the causes of the poverty of the latter; and we find that severe enactments and even forfeitures were made to prevent it. Many years since the money drawn in this way from her capital was estimated at 4,000,000 *l.*; there seems no reason to believe that it is now less; and when we reflect that the revenue collected is more (by a considerable sum which is uncredited to it) than the amount given in the official returns, we can form a fair estimate of the large sum which is annually drawn from the resources of so poor a country as Ireland.

Mr. Senior { - 5034 / - 5053
Dillon - - 1373
Fisher - - 3504
Dwyer - - 5614
Lambert - 4014
Napier - - 3820
O'Regan - 4576

"48. The amount of Irish revenue in the official returns is always understated; for, in addition to the amount given as the revenue of Ireland for the year 1863 (6,828,490 *l.*), there should be added a proportion of what are called miscellaneous receipts, which amounted in 1864 to 3,035,963 *l.*, of which, in the Finance Accounts, only 27,231 *l.* is given to her.

See Finance Accounts, page 10.

"49. In addition, a large proportion of duties are paid in England on articles consumed in Ireland, which should be credited to her. By an arrangement made at the Union, such articles were charged with duty in both countries, and a drawback was given to the merchants in the country from which they were exported. In 1823 this system was abolished, and as the greater part of articles from foreign countries (consumed in Ireland) are still imported through England, and pay duty there, this duty has been since credited to the English, although the Irish revenue is entitled to it; and as evidence is given before your Committee that the duty on the article of sugar alone amounts to 800,000 *l.*, and a certain quantity of tea, cigars, and other articles, are imported in the same manner, the amount must even, at a moderate calculation, amount to 1,000,000 *l.*, which should be added to the revenue of Ireland, and deducted from that of Great Britain. Thus, the public income of Ireland, which is stated in the Revenue Accounts to 31st March 1864, at 6,790,153 *l.*, should be at least 7,790,153 *l.*

1321.
1318.
1319.
1349.

"50. A Return was presented to the House of Commons, which shows the comparative poundage rate of taxation in both Great Britain and Ireland. It takes the revenue of each country at the official statement, and the amount of property and profits at the amount then assessed to the income tax, the result is that the amount for revenue on each 1 *l.* of income is 4 *s.* 0¾ *d.* for England, and 6 *s.* 3¼ *d.* for Ireland; can this be just?

Return 452, Sess. 1863.

"51. As to the present ability of Ireland to bear such taxation, without referring to the evidence of the Irish witnesses, your Committee must call attention to the evidence of Mr. Senior, an Englishman, who had for many years been officially connected with Ireland; he states that the taxation of Great Britain, compared with her ability to bear it, is, perhaps, the lightest in Europe; but if you take that of Ireland, 'it is heavy both 'as regards the actual amount and the ability of the contributors;' he also states that 'the 'pressure of taxation is most uneven against Ireland.'

Senior, 5031.

"52. It was suggested that Ireland should be considered as an integral part of Great Britain, and that Wiltshire, or any other part of that kingdom where wealth and prosperity was not so great as in other districts, might make the same complaint; but Mr. Senior repudiated such an idea; he stated that Ireland 'had a case of its own.' That she was separated from Great Britain 'by a great big ditch, and therefore we can clearly distinguish her case; 'and she has also been separately dealt with in almost all Acts of Parliament: a great 'proportion of legislation deals with Ireland separately from other portions of the United 'Kingdom.' And he might have added that the Act of Union itself recognised her as a separate kingdom, as does every Act of Parliament to this hour.

Senior, 5533.

"53. Sir Robert Peel, at the time of the repeal of the Corn Laws, recognised the injury that would be inflicted on Ireland by that repeal, and accordingly he did not impose the Income Tax, or raise the duty on spirits made in that country; but since then the Income Tax has been extended to Ireland, and the spirit duties equalised with those of England.

"54. Your Committee has also turned its attention to the local taxation of each country, but found some difficulty in obtaining perfectly accurate information. For several years after the Union the local taxation of Ireland consisted merely of the county rates, the rates in cities, boroughs, and corporations, and some rates for church purposes, now abolished; but in 1840 it added enormously to the local burdens, when Ireland was least able to bear it. The charge in 1849 amounted to 2,177,651 *l.*, and in the four years, 1848, 1849, 1850, and 1851, a sum of 6,585,070 *l.* was raised by means of this tax, which had just been imposed, from a country desolated, as Ireland then was, by famine and sickness. The present amount of poor-rate has diminished to 596,465 *l.* in 1864.

Senior, 5045. 5065.

"But further additions have been made to it lately.

5052.

"The following Return was laid before the Committee of 1852, by Mr. J. Vandeleur Stewart:—

"RETURN of RATEABLE PROPERTY and LOCAL RATES, laid by *J. Vandeleur Stewart*, Esq., before the Consolidated Annuities (Ireland) Committee, 1852.

	£.
"ENGLAND.	
"Rateable property	105,000,000
"Local taxation	12,000,000
"2*s.* 3¼*d.* in the £.	
"IRELAND.	
"Rateable property before repeal of Corn Law	13,000,000
"Griffiths' statement of deterioration after famine, 9,890,500*l.*; say	10,000,000
"Poor-rate—average expenditure 3 years to 1850 £. 1,814,464	
"County cess—average 3 years 1,142,302	
"Repaying Consolidated Annuities 245,471	
	2,817,471
"Which gives 5*s.* 7¼*d.* in the £.	

"55. While this addition, amounting in one year to 2,000,000 *l.*, was made to the local taxation of Ireland, considerable relief was given to that of England, both in counties and boroughs. By a Return of Mr. Hardcastle (No. 596, Session 1849, July 31), it is shown that a sum of 596,478 *l.* was remitted annually to the former, and to the latter, 106,496 *l.*, or a total of 702,976 *l.* per annum; and a Return obtained by Mr. Hume, and one which will be found in the evidence before the Select Committee on County Rates, Ireland, 1855, shows that from the years 1846 to 1858, a sum of 5,014,000 *l.* was granted in aid of charges borne on the county rates in Great Britain.

"56. A Committee which sat in 1858 obtained a small sum in aid of the local taxation in Ireland, which had previously been granted but not raised. The present amount of aid to local taxation of each country will be found in the Appendix; although there are besides in Great Britain many grants for embellishments, for parks lately created in London, and other metropolitan objects, which are omitted, but which must be considered in aid of local rates. Mr. Chisholm calculates the present aid to local rates in England at 1,801,595 *l.*, and in Ireland at 894,801 *l.*, of which 686,962 *l.* is for the constabulary

App. 1865.

"57. Among these remissions stated to be given to Ireland in aid of local taxation, the payment of the Irish constabulary is here reckoned; but it should be considered that this force of nearly 13,000 men is far beyond the requirements of Ireland for a mere police force; that it is essentially military, withdrawn from the control of the local magistracy, and that it is kept up for reasons of Imperial policy, and performs the duty of revenue police, of collecting statistics, and many others which are not required, more especially for Ireland than for other parts of the empire. Besides, a sum of about 18,000 *l.* a year is now paid by the counties for extra police; and they should only be fairly charged for what they actually require for the peace of the country.

"58. The moiety of the salaries of the schoolmasters under the Poor Law, and those of the poor-law medical officers, are paid in Great Britain; and it does not appear to your Committee there is any reason why they should not be paid in Ireland also.

"59. There is some difficulty in obtaining the exact valuation on which the taxation is imposed in Great Britain, because the valuation is not uniform, and probably differs in various localities; while in Ireland there is an uniform valuation for the whole country. Mr. Chisholm states the rateable value of England and Wales assessed to poor rate in 1855–56 at 71,840,271 *l.*, while the sum charged for income tax under Schedules (A.) and (B.) in 1864, would be 141,440,433 *l.*, which shows the difference between valuation and rent; but in Ireland the income tax is charged on the valuation. Calculations by Mr. Dwyer will be found in the Appendix.

App. 9, 1865, p. 160.

"60. The valuation of Scotland is calculated at, Schedules (A.) and (B.), 17,621,801 *l.*; and therefore, for the whole of Great Britain, at 159,062,234 *l.* The amount which is chargeable for income tax in England is 276,119,814 *l.*, and in Ireland it is 23,014,594 *l.* Thus is shown a poundage rate of 4*s.* 0¾*d.* in England, and of 6*s.* 3½*d.* in Ireland, for Imperial taxation on the valuations given by the Government Return; and in our local taxations of 2 *s.* 3½ *d.* in the £. for England, and of 5 *s.* 7¼ *d.* in the £. for Ireland. With such evidence before it, your Committee can come to no other conclusion than that the present taxation of Ireland is oppressive and unjust with reference to the resources of the country.

Return 452, Sess. 1863. Vandeleur Stewart's Evidence, 1852.

"61. In the present Session a further reference was made to your Committee as to the system upon which advances are made, and repayments required by the Imperial Government for drainage, and other works of public utility in Ireland.

"62. In the Appendix will be found the suggestions of Lord Clanricarde and other witnesses as to modification of the rules laid down by the Government for the advances of loans

loans in Ireland, and those which are considered to impede the execution of the works, and especially the erection of cottages for which have been advanced, as well as for extending these loans to the erection of agricultural machinery.

"63. Returns are also given in the Appendix of the sums already advanced for reproductive works in each country.

"64. Evidence has also been given of the good effected by the judicious application of a small sum which Mr. Andrews stated was applied by way of loan to the assistance of the fishermen on the east coast of Ireland, and in a few places, as at Dingle, on the west. He states that not only has the benefit of these poor people, who otherwise from want of capital would have been unable to procure boats or nets, been most effective, and that for 10 years in no instance have the loans been unrepaid. He further states that an Act under which Scotland at this moment receives 3,000 *l.* a year in aid of poor fishermen, a sum of 5,000 *l.* is granted to Ireland, but has not been voted nor drawn for the last 30 years, and that the Act is not repealed. Mr. Barry, the Fishery Commissioner, takes a different view, and there will be found in the Appendix a communication from the Treasury on the subject, and Your Committee wish to call the immediate attention of the Irish Government to a subject so interesting to Ireland."

Draft Report proposed by Sir *Stafford Northcote*, read 1°, as follows:—

"1. The question to which your Committee, in the first instance, addressed themselves, was that of the conformity of the taxation of Ireland with the provisions of the Treaty of Union.

"2. They found it alleged that the provisions of that treaty had been violated by the setting aside of the arrangements for making separate provision for the charge of the English and the Irish debts respectively, and by the introduction of a system of indiscriminate, and nearly uniform, taxation in each country, in place of the system established at the time of the Union, under which, while each country had to make provision, in the first instance, for its own separate expenditure, Great Britain was called upon to contribute fifteen-seventeenths, or about 88 ¼ per cent., and Ireland two-seventeenths, or about 11 ¾ per cent., of the sums required for the joint expenditure of the United Kingdom.

"3. The arguments by which these allegations are supported will be found in the evidence of Mr. Dillon and of Mr. Fisher. It will be seen on examination that they mainly turn upon two points; first, it is contended that the provisions of the Article of the Treaty of Union which relate to the creation of future debt, and to the circumstances under which indiscriminate taxation might be introduced, have been wrongly interpreted by the Parliament of the United Kingdom; and secondly, it is said, that even if Parliament was correct in its interpretation, the accounts upon which it has from time to time acted were inconsistent and incorrect.

"4. Your Committee proceed to examine these two allegations; and, in the first place, that which rests upon the supposed error in the construction of the Act of Union.

"5. The Seventh Article of the Treaty of Union, which is embodied in the Act of Union (39 & 40 Geo. 3, c. 67), runs thus:—

Interest and Sinking Fund of either Kingdom defrayed separately.

"'That it be the Seventh Article of Union, that the charge arising from the payment of the interest, and the sinking fund for the reduction of the principal of the debt incurred in either Kingdom before the Union, shall continue to be separately defrayed by Great Britain and Ireland respectively, except as hereinafter provided:

How expenditure of United Kingdom defrayed and provided for.

"'That, for the space of 20 years after the Union shall take place, the contribution of Great Britain and Ireland respectively, towards the expenditure of the United Kingdom in each year, shall be defrayed in the proportion of 15 parts for Great Britain and two parts for Ireland; and that at the expiration of the said 20 years, the future expenditure of the United Kingdom (other than the interest and charges of the debt to which either country shall be separately liable) shall be defrayed in such proportion as the Parliament of the United Kingdom shall deem just and reasonable upon a comparison of the real value of the exports and imports of the respective countries, upon an average of the three years next preceding the period of revision; or on a comparison of the value of the quantities of the following articles consumed within the respective countries, on a similar average, videlicet, beer, spirits, sugar, wine, tea, tobacco, and malt; or according to the aggregate proportion resulting from both these considerations combined; or on a comparison of the amount of income in each country, estimated from the produce for the same period of a general tax, if such shall have been imposed on the same descriptions of income in both countries; and that the Parliament of the United Kingdom shall afterwards proceed in like manner to revise and fix the said proportions according to the same rules or any of them, at periods not more distant than 20 years, nor less than seven years from each other; unless, previous to any such period, the Parliament of the United Kingdom shall have declared, as hereinafter provided, that the expenditure of the United Kingdom shall be defrayed indiscriminately, by equal taxes imposed on the like articles in both countries: That, for the defraying the said expenditure according to the rules above laid down, the revenues of Ireland shall hereafter constitute a Consolidated Fund, which shall be charged, in the first instance, with the interest of the debt of Ireland, and with the sinking fund, applicable to the reduction of the said debt, and the remainder shall be applicable towards defraying the proportion of the expenditure of the United Kingdom, to

Consolidated Fund.

which Ireland may be liable in each year; that the proportion of contribution to which Great Britain and Ireland will be liable, shall be raised by such taxes in each country respectively, as the Parliament of the United Kingdom shall from time to time deem fit: Proviso. Provided always, that in regulating the taxes in each country, by which their respective proportions shall be levied, no article in Ireland shall be made liable to any new or additional duty, by which the whole amount of duty payable thereon would exceed the amount which will be thereafter payable in England on the like article: That if at the end of any year any surplus shall accrue from the revenues of Ireland, after defraying the interest, sinking fund, and proportional contributions and separate charges to which the said country shall then be liable, taxes shall be taken off to the amount of such surplus, or the surplus shall be applied by the Parliament of the United Kingdom to local purposes in Ireland, or to make good any deficiency which may arise in the revenues of Ireland in time of peace, or be invested by the Commissioners of the National Debt of Ireland in the Funds, to accumulate for the benefit of Ireland at compound interest in ease of the contribution of Ireland in time of war; provided that the surplus so to accumulate shall at no future period be suffered to exceed the sum of 5,000,000 *l.*: That all monies to be raised after the Union, by loan, in peace or war, for the service of the United Kingdom by the Parliament thereof, shall be considered to be a joint debt, and the charges thereof shall be borne by the respective countries in the proportion of their respective contributions; provided that, if at any time, in raising their respective contributions hereby fixed for each country, the Parliament of the United Kingdom shall judge it fit to raise a greater proportion of such respective contributions in one country within the year than in the other, or to set apart a greater proportion of sinking fund for the liquidation of the whole or any part of the loan raised on account of the one country than of that raised on account of the other country, then such part of the said loan, for the liquidation of which different provisions shall have been made for the respective countries, shall be kept distinct, and shall be borne by each separately, and only that part of the said loan be deemed joint and common, for the reduction of which the respective countries shall have made provision in the proportion of their respective contributions: That if at any future day the separate debt of each country respectively shall have been liquidated, or, if the values of their respective debts (estimated according to the amount of the interest and annuities attending the same, and of the sinking fund applicable to the reduction thereof, and to the period within which the whole capital of such debt shall appear to be redeemable by such sinking fund) shall be to each other in the same proportion with the respective contributions of each country respectively; or if the amount by which the value of the larger of such debts shall vary from such proportion shall not exceed one hundredth part of the said value; and if it shall appear to the Parliament of the United Kingdom that the respective circumstances of the two countries will thenceforth admit of their contributing indiscriminately, by equal taxes imposed on the same articles in each, to the future expenditure of the United Kingdom, it shall be competent to the Parliament of the United Kingdom to declare that all future expense thenceforth to be incurred, together with the interest and charges of all joint debts contracted previous to such declaration, shall be so defrayed indiscriminately by equal taxes imposed on the same articles in each country, and thenceforth from time to time, as circumstances may require, to impose and apply such taxes accordingly, subject only to such particular exemptions or abatements in Ireland, and in that part of Great Britain called Scotland, as circumstances may appear from time to time to demand: That from the period of such declaration, it shall no longer be necessary to regulate the contribution of the two countries towards the future expenditure of the United Kingdom, according to Proviso. any specific proportion, or according to any of the rules hereinbefore prescribed: Provided nevertheless, that the interest or charges which may remain on account of any part of the separate debt with which either country shall be chargeable, and which shall not be liquidated or consolidated proportionably as above, shall, until extinguished, continue to be defrayed by separate taxes in each country: That a sum, not less than the sum which has been granted by the Parliament of Ireland on the average of six years immediately preceding the 1st day of January in the year 1800, in premiums for the internal encouragement of agriculture or manufactures, or for the maintaining institutions for pious and charitable purposes, shall be applied, for the period of 20 years after the Union, to such local purposes in Ireland, in such manner as the Parliament of the United Kingdom shall direct: That from and after the 1st day of January 1801, all public revenue arising to the United Kingdom from the territorial dependencies thereof, and applied to the general expenditure of the United Kingdom, shall be so applied in the proportions of the respective contributions of the two countries.'

" 6. The language of this Article is far from clear, and there are several points on which doubts have arisen as to its meaning. One of the most important of these doubts relates to the question, whether it was competent to the Imperial Parliament, consistently with the terms of the Union, to make any addition to the separate debt of Ireland after the Union. As a matter of fact, it appears that additions were made to the separate debts of the two countries in each year from 1800 to 1816; that the additions to the Irish debt were proportionately much larger than the additions to the British debt; that in 1816 the separate debt of Ireland had, by means of these additions, not only reached but passed the point at which 'the values of the respective debts' were to each other 'in the same 'proportion with the respective contributions of each country respectively;' and that the Imperial Parliament thereupon considered that the contingency contemplated by the Act of Union had arisen, and proceeded to amalgamate the British and Irish Exchequers, and

to

to impose taxation, which, though not absolutely equal, was so far indiscriminate that no fixed proportion was thenceforth taken as a guide.

" 7. It is contended that this course of proceeding was at variance with the Treaty of Union; that the Irish Pre-Union separate debt ought never to have been added to; and that the only mode in which the contingency contemplated by the 7th Article of the Treaty could legitimately have arisen, was by the reduction of the British separate debt to the rate of 15-17ths of the whole Pre-Union debt of the two countries. This view is supported by Sir C. O'Loghlen and Mr. Dillon; but neither of these gentlemen find it easy to reconcile it with the provision that, 'If at any time, in raising the respective contributions for each country, the Parliament of the United Kingdom should judge it fit to raise a greater proportion of such respective contributions in one country within the year than in the other . . . . then such part of the said loan . . . . shall be kept distinct, and shall be borne by each separately.' Sir C. O'Loghlen, who confesses that he does not fully understand this provision, suggests that it may apply to temporary loans rather than to a permanent addition to the Pre-Union debt, and considers that if Ireland had failed to make good her contributions for several years, the accumulated deficiency ought to have been charged against her, and defrayed out of separate taxation. Mr. Dillon says, 'that he gives his opinion with some diffidence, on account of the obscurity of the provision, and the ambiguity of the Act; and admits that others may take a different view from his own; as, for instance, he finds that the Select Committee of 1815 clearly did.'

Ev. 31–35. Ev. 691–695. Ev. 20. 74. Ev. 83–87. Ev. 695, 696. Ev. 801–807. 1082. Ev. 1066.

" 8. On the other hand, Mr. Napier, the late Chancellor of Ireland, considers that the provision which has just been quoted, 'did contemplate an addition to the pre-existing debt, because there was a provision made for the proportion of the loan, that was to be liquidated in a special way, and it was to be borne by each separately;' and, again, he says that the proviso 'seems to contemplate the possibility of an addition to the separate debt.' The following extract from Mr. Napier's evidence will further show the view which he takes, both on this point and on the sufficiency of the Act for the Amalgamation of the British and Irish Exchequer, which has been called in question by some witnesses.

Ev. 3591. Ev. 3600.

" '3629. Mr. *Lowe.*] I understand you that you think the separate debt of Ireland could lawfully be increased after the Union?—Yes, I do. I certainly think that the true construction.

" '3630. In several ways; and amongst those ways to make up any deficiency of contribution on the part of Ireland; is that so?—I think so.

" '3631. Then I understand you to think that the proportion between the two debts required, in order for the consolidation mentioned in the Treaty of Union, might take place by increasing the Irish debt, as well as by diminishing the English debt?—I think it might; either by decreasing the English or increasing the Irish debt.

" '3632. I will call your attention with reference to the power that is given here to consolidate the Treaty of Union, so that under certain circumstances, that is, on the debt attaining a particular ratio, it shall be lawful for Parliament to declare that fact, and then that certain consequence shall follow by the Treaty of Union?—Yes.

" '3633. Even supposing Parliament not to have made such a declaration formally, but to have proceeded by way of statute, instead of by way of declaration, the only material difference would be, would it not, supposing that the conditions were complied with, that Parliament would have adopted a different way, but the substance of the transaction would have been the same?—That is rather a matter of conveyancing than a question of statesmanship.

" '3634. Provided the ratio were really established?—Yes; that is the substance of the thing.

" '3635. The only difference would be that, if the declaration was made, the Treaty of Union would be operative for that purpose, but if not formally made, the Act of Parliament that assumed to do it would be operative?—With regard to the power that is to be exercised under the Treaty of Union, one likes to look at the substance and spirit of it; and although the nicety of conveyancing might not be followed, to my mind it would make no difference if, in point of truth and fact, the power was really and truly executed.

" '3636. The real difference would be, that in the one case the Treaty of Union would be operative, and in the other the Act would be operative, would it not?—The Act is operative, as I conceive, because it is in pursuance of the Treaty of Union.

" '3637. You find that the statute of 1816 assumes the Act by its own figure; that, probably, might be an error, but you think it would make no substantial difference?—The Act, I think, springs out of the power which was conferred by the Act of Union, and should be referred to the power thereby given.

" '3638. To take your own metaphor, the statesman does not assume the Act so much on the mere spirit of conveyancing, as on the substantial features of the power conferred?—Having regard to what was done, the resolutions that were passed in Committee, and looking at the language at the beginning of the statute, I think it professes to go on the Act of Union, and to follow it; but if there was any departure, I think it was a matter of conveyancing. I do not think, in a question of statesmanship and legislation, it should be regarded.'

" 9. It will be seen that Mr. Napier's construction of the Act of Union, which is substantially the same as that taken, though from a different point of view, by the late Mr.

Ev. 801. O'Connell, justifies the proceeding of the Imperial Parliament, which has been called in question by Sir C. O'Loghlen and Mr. Dillon. It does not, however, appear to your Committee to be a question of primary importance whether the one or the other interpretation be the correct one. The really important question is, whether injustice has been done to Ireland? If it was found that a literal compliance with the terms of the Treaty of Union would have been injurious to her, it cannot now be made a ground of complaint on her part, that the terms were not strictly observed, or that they were set aside by the Imperial Parliament, in the proceedings of which it must be remembered that the Irish members concurred. The amalgamation of the Exchequers in 1817 was the result of the reports of several Committees, which sat in the years 1811, 1812, and 1815, and which recommended the measure in what they considered the interests of Ireland. If the facts set forth in those reports were correct, Ireland was no loser, but a gainer by the amalgamation; and if this was the effect of the transaction, it does not become the Parliament of 1864 to cavil at the settlement, at which its predecessors arrived in 1816, on the ground of alleged inconsistencies between their legislation and the terms of the Act of Union. It is the substance and spirit of that legislation which alone it is now possible to call in question.

"10. It is obvious that if a separate debt could not be created, Ireland might have been required to make good, year by year, her contribution of 2-17ths to the joint expenditure of the whole kingdom, by taxes bearing to the taxes of Great Britain the proportion of 2 to 15, and to bear her share of the joint debt which would have been created to make up the deficiency. Now, the joint expenditure of the United Kingdom in the years 1801–1816, was 841,953,218*l.* The proportion of this sum for which Ireland would have had to make provision by taxes or loans, was 99,053,319*l.* She would also have had to provide for her separate expenditure, which (assuming that no addition had been made to her separate Pre-Union debt) would have amounted to 25,163,488*l.* for debt and sinking fund, and 4,330,920*l.* for other separate expenditure, including charges for services prior to the Union, making a total of 128,547,727*l.* In point of fact, however, she actually expended the total sum of 159,737,804*l.* The difference arises from the fact that she did not provide for the whole of her expenditure by taxation, but by a system of borrowing, and that she had consequently to bear the charge of compound interest; but to this she would have been equally liable whether the debt she incurred were called joint or separate, unless she could have thrown upon Great Britain the burden of 15-17ths not only of the joint expenditure, but of the separate deficiency of Ireland likewise.

App. 12, p. 5.

Ev. 6531.

App. 11, p. 37.

"11. The state of the case is clearly shown in the Report of the Select Committee of 1812, in which it is pointed out that it would have made but a nominal difference, had so much of the Irish loan of each year as bore to the British loan the proportions of the contribution of Ireland, viz., 2 to 15, been considered as joint debt, because the charge to be borne by Ireland in respect of the two portions of loan, viz., the joint and the separate portion, would, in that case, have been exactly equal to that which was incurred on account of the Irish debt undivided. Mr. Dillon also admits that Ireland was in as good a position as if the loans had been joint loans.

Ev. 1184.

"12. If, indeed, a larger amount than the proportion above referred to had been carried to joint debt, Ireland would have been relieved, but only at the expense of Great Britain, which would have had, besides paying her own contribution by taxes and loan, to bear 15-17ths of the deficiency of Ireland's contribution. Thus, assuming 34,000,000*l.* to have been required for joint expenditure, and Great Britain to have raised 15,000,000*l.* by taxation, while Ireland raised only 1,000,000*l.* in that manner, if the remaining 18,000,000*l.* had been raised by the creation of joint debt, Great Britain would have been made liable not only for her fair proportion of the joint deficiency, but for 15-17ths of 1,000,000*l.*, the amount of Ireland's separate deficiency, in addition.

"13. It appears, then, that the heavy charge upon Ireland was the result, not of the accounts being kept separate, but of too small an amount being raised in that country by taxation, and too large an amount by loan. The burden upon the resources of Ireland was heavy, the ordinary taxation failed to realise what was expected, and as it was thought inexpedient to extend the income tax to that country, a resort to loans was rendered necessary, and these involved a charge not only for simple but for compound interest. There can be no doubt but that Ireland was thus in the end a sufferer from the disproportion between the amount raised by loans, and that raised by taxation.

"14. Within the same period, 1801–1816, Great Britain raised by war taxes, which did not apply to Ireland, the sum of 254,502,984*l.* Raising this large sum by taxation, she found it unnecessary to have recourse to loans to the same extent in proportion to her resources, as Ireland did. This fact explains the alteration in the proportions between the debts. While the separate funded debt of Great Britain increased from 420,305,944*l.* in 1801, to 682,531,933*l.* in 1817, the separate funded debt of Ireland increased in the same period from 26,841,219*l.* to 86,838,938*l.*, and the proportion between the two, which at the Union was about 1 to 15·5, became in 1816 about 1 to 7·8. Within the same period the unfunded debt of Great Britain in Exchequer Bills advanced from 26,080,100*l.* to 44,650,300*l.*, and the unfunded debt of Ireland from 1,699,938*l.* to 5,304,615*l.*

"15. This was in substance the state of facts laid before the Select Committee of 1815, and it forms the ground of their recommendation that the debts should be consolidated, and

and the Exchequers of the two countries amalgamated. Your Committee are of opinion that, under the circumstances, that Committee were justified in making, and the Imperial Parliament in acting upon, that recommendation.

" 16. It has been alleged by some of the witnesses examined before your Committee that the accounts which have from time to time been laid before Parliament, including those which form the groundwork of the recommendation of the Committee of 1815, are inconsistent one with another; and that the conclusions of that Committee are thereby invalidated. Your Committee have bestowed a great deal of time and attention on the investigation of these alleged inconsistencies. They find that nearly all of them are apparent rather than real, and that they arise, for the most part, from the different principles upon which different accounts have been called for by Parliament, and prepared on different occasions, and from the want of sufficient attention on the part of those who have made use of these accounts without observing the principles on which they have been framed. It is obvious, for instance, that when one account of the revenues of a particular year is called for, including arrears and balances, and another account is called for at another time, excluding them, the two accounts must differ, and ought not to be used indiscriminately, as has sometimes been done. The various causes of confusion in the comparison of these accounts are well stated by Mr. Chisholm. Your Committee do not think it necessary to enter into the details of the investigation they have pursued; and consider it sufficient to observe, that the alleged discrepancies have been explained by the officers of the Treasury and of the Exchequer to their entire satisfaction. They desire, in passing, to express their thanks to Mr. Chisholm, the Chief Clerk of the Exchequer, for the pains he has taken and the assistance he has rendered them in their laborious inquiry.

Ev. 6613, App. 17, p. 419.

" 17. It would have been satisfactory to your Committee if they could have presented an account of the total net liabilities of the two countries at the Union, and again at the time of the amalgamation of the Exchequers; but after careful consideration, they find it impossible to do so. An approximation to such an account for Great Britain alone at the time of the Union may be found in the Appendix No. 12 (p. 396); but, as appears in the following page, a similar Return cannot be made for Ireland, as no similar estimate of her liabilities on account of the demands outstanding for supply services exists. It appears, too, on a close investigation, first, that the estimated liabilities of Great Britain for demands outstanding at the time of the Union fall far short of the amounts which were actually paid on account of those demands in the course of the 16 years after the Union; secondly, that no complete account is taken of the ways and means by which those demands were met; and, thirdly, that even if the account for Ireland could be completed like that for Great Britain, great inaccuracy would result from reckoning the balances in the hands of collectors and receivers assets available to meet the liabilities, inasmuch as a considerable proportion of the balances due from Irish collectors was never received. It would, moreover, lead to great confusion if an attempt were made to set balances of this kind, or temporary balances in the Exchequer, appropriated to supply services, against the amount of the funded and unfunded debt bearing annual interest. All that your Committee can do is to state the values of the respective debts, which by the terms of the Act of Union were to be 'estimated according to the amount of the interest and annuities attending the same, and of the sinking fund applicable to the reduction thereof.' A statement has been prepared by Mr. Finlaison, the Actuary of the National Debt Office, and will be found in the Appendix 14. p. 411, from which it appears that on the 1st January 1801, the value of the unredeemed funded debt of Great Britain, including the Imperial loan to Germany, was 303,788,485 *l.*, and that of the unredeemed funded debt of Ireland 21,498,872 *l.*, being in the proportion of 28·2 to 2; and that on the 5th January 1817 the value of the British funded debt was 501,648,734 *l.*, and of the Irish debt 81,688,316 *l.*, being in the proportion of 11·2 to 2. To these amounts should be added the unfunded debts in Exchequer bills, or in Irish Treasury bills, which in 1801 stood at 26,080,100 *l.* for Great Britain and at 1,699,938 *l.* for Ireland; and in 1817 at 44,650,300 *l.* for the former, and 5,304,615 *l.* for the latter. The result, therefore, is, that the value of the whole debt of Great Britain at the time of the Union was 329,868,585 *l.*, and the value of the whole debt of Ireland 23,198,810 *l.*, and the proportion as 28·4 to 2; and that the value of the whole debt of Great Britain at the time of the amalgamation of the Exchequers was 546,299,034 *l.*, the value of the whole debt of Ireland 86,992,931 *l.*, and the proportion as 12·5 to 2.

" 18. The period had therefore arrived when, according to the construction put upon the Treaty of Union by the Committee of 1815, and confirmed by Mr. Napier and other authorities, the amalgamation of the debts and the introduction of a system of indiscriminate taxation was intended to take place. Had that amalgamation not taken place, and had the system of raising revenue which prevailed from 1801 to 1816 been continued, the Irish separate debt would have continued to increase until the country might have been crushed by it.

" 19. From 1817 the system of taxation adopted has been, in a certain sense, indiscriminate; but Ireland has been so far favoured that she has been more or less exempted from certain direct taxation which has been laid upon Great Britain. Since 1823, when the trade between the two countries was put upon the footing of a coasting trade, the Customs' duties in the two have necessarily been identical. But the Excise duty on spirits was for a long time lower in Ireland than in Great Britain; the Income Tax was

not for a long time extended to Ireland; and she is still exempt from the Land and Assessed Taxes, and from the duties on railway passengers, and on stage carriages and racehorses, the gross receipt of which in Great Britain amounted to 3,800,175*l.* in 1863–64.

"20. Of late years considerable additions have been made to Irish taxation, and it has been placed more nearly on an equality with that of Great Britain. The spirit duties have been equalised, and the Income Tax has been applied to the whole kingdom. At the same time the whole taxation of the entire kingdom has been increased. The amount of revenue raised in the United Kingdom by taxation, excluding casual and miscellaneous receipts, in the year 1852–53, was 56,867,652*l.* In the year 1861–62 the amount was 68,153,355*l.*, showing an addition of 20 per cent. to the burdens of the people. Moreover, this addition has been made in such a manner as to lay upon Ireland a greater proportionate burden than has been laid upon Great Britain. The increase of taxation in Great Britain in the 10 years which have been referred to was 17 per cent.; the increase in Ireland was 52 per cent. The following comparative statement will show the proportion of the receipts of ordinary revenue in the two countries respectively, in periods of five years from the Union to the year 1862:—

App. 15, p. 413.

App. 15, p. 414.

In four years ending 5th January 1806, the proportion of Irish revenue to British was about				- - -	1-13th.
In the five years ending 5th January				1811 - - -	1-14th.
"	"	"	"	1816 - - -	1-13th.
"	"	"	"	1821 - - -	1-12th.
"	"	"	"	1826 - - -	1-13th.
"	"	"	"	1831 - - -	1-13th.
"	"	"	"	1836 - - -	1-12th.
"	"	"	"	1841 - - -	1-12th.
"	"	"	"	1847 - - -	1-11th.
"	"	"	"	1852 - - -	1-11th.
"	"	"	31 March	1857 - - -	1-10th.
"	"	"	"	1862 - - -	1-9th.

Parl. Paper 110 of Sess. 1865, p. 17.

From another return it appears that the proportion of benefit which Ireland has received by the remissions of taxation which have taken place since 1816, has been as $\frac{2}{26 \cdot 5}$ of the benefit conferred upon Great Britain. An examination of the return from which this result is taken, will show that in the years from 1816 to 1841 inclusive, the remissions to Great Britain were in the proportion of 22·4 to 2, to the remissions to Ireland; in the years 1842 to 1852 the proportion was 34 to 2; and in the years 1853 to 1864 the proportion was 28·7 to 2. If the Income Tax were excluded from the account, it would appear that the proportion in the last period was 33 to 2. The additions to taxation in the same periods were as follows:—Between 1816 and 1841 the proportion was 13· to 2; between 1841 and 1852 it was 30· to 2, or, excluding the Income Tax, 4· to 2; between 1853 and 1864 it was 13· to 2; or, excluding the Income Tax, 96· to 2.

"The net result will be as follows:—

	Taxes Remitted.	Taxes Imposed.	Balance of Taxes Remitted.	
			Amount.	Proportion.
1816–64.	£.	£.	£.	Per Cent.
Great Britain - - -	72,479,850	35,589,839	36,610,011	98·63 or 144 to
Ireland - - - -	5,488,979	4,981,023	507,956	1·37 or 2.
TOTAL - - £.	77,968,829	40,570,862	37,117,967	100·

"21. As regards the local taxation of the two countries, your Committee find much difficulty in obtaining adequate information. A paper which has been prepared by Mr. Chisholm, and which will be found in the Appendix shows that no account approaching completeness can be given for the year of the Union (1801), or for the year of the amalgamation of the Exchequers (1817). For 1845 and 1863-64, respectively, Mr. Chisholm computes the proportionate local taxation of all kinds as follows:—

	1845.		1863–64.	
	Amount.	Per Cent.	Amount.	Per Cent.
	£.		£.	
England and Wales - - - - -	10,456,437	- -	12,453,052	
Scotland - - - - - - -	734,383	- -	1,312,801	
GREAT BRITAIN - - -	11,190,820	88·24	13,765,853	88·24
Ireland - - - - - - -	1,490,631	11·76	1,816,275	11·76
UNITED KINGDOM - -	12,681,451	- -	15,582,128	

"According

"According to this statement, the local burdens of the two countries were, in 1845, very nearly in the proportion assigned to each at the time of the Union for general taxation, viz., 88¼ to 11¾ per cent.; and the proportion is not very materially altered in 1863–4, though in the meantime considerable additions had been made to the local taxation of both. The alteration, such as it is, is in favour of Ireland, the addition to British local taxation having been about 42 per cent., and that to Irish local taxation about 25 per cent. As regards the aid which either country has received from Imperial funds towards its local taxes, Mr. Chisholm supplies the following information:—

I.—Grants in Aid of Local Taxation. App. 1865.

	1801.	1817.	1845.	1863-4.
	£.	£.	£.	£.
England and Wales - - - - -	67,262	143,010	408,563	1,600,866
Scotland - - - - - - - -	- -	4,640	107,190	200,729
Great Britain - - -	67,262	147,650	515,753	1,801,595
Ireland - - - - - - - -	43,883	32,769	411,879	894,801
United Kingdom - - -	111,145	180,419	927,632	2,696,396

"It will be observed that the cost of the Irish constabulary is included among the items of Imperial expenditure in aid of local taxation. It must, of course, be borne in mind that the services rendered by the constabulary are not only of a local character, but that the force is employed for the collection of a considerable portion of the Imperial revenue, and that it may also be to some extent regarded as a military body. Your Committee will not attempt to distinguish between the amount expended on the constabulary as an Imperial force, and the amount granted in aid of local taxation. Upon another point which has given rise to much discussion, the grants for Poor-law medical officers, and for workhouse schoolmasters, Your Committee are of opinion that it would be reasonable that the same aid should be extended to Ireland as is already extended to England. It is evident, they think, that if the Poor-law system had been the same in 1846 as it is now, the aid in question would have been made to both countries simultaneously. It will be observed, that since 1845, the share which Great Britain has had in the remission of Imperial taxation has been much larger than that which Ireland has had; and the additions made to the Imperial taxation of Ireland have been heavier than those made to the taxation of Great Britain, while at the same time it can hardly be doubted that Great Britain has derived a larger measure of advantage than Ireland, from the repeal of the corn laws, as a compensation for which the boon was originally given by Sir R. Peel.

"22. It is not surprising that the large increase which your Committee have noticed in the general taxation between 1852 and 1862, and again in the local taxation since 1845, should have given rise to complaint. Nor is it surprising that louder complaints should have been made by Ireland than by other parts of the United Kingdom. The pressure of taxation will be felt most by the weakest part of the community, and as the average wealth of the Irish taxpayers is less than the average wealth of the English taxpayers, the ability of Ireland to bear heavy taxation is evidently less than the ability of England. Ev. 5031. Mr. Senior, whose evidence upon the position of Ireland will be found very suggestive, remarks that the taxation of England is both the heaviest and the lightest in Europe; the heaviest as regards the amount raised, the lightest as regards the ability to bear that amount; but that in the case of Ireland it is heavy both as regards the amount and as regards the ability of the contributor; and he adds, that England is the most lightly taxed Ev. 5443. and Ireland the most heavily taxed country in Europe, although both are nominally liable to equal taxation. Some calculations, bearing on the relative abilities of the two countries, will be found in a paper drawn up by Mr. Chisholm, and inserted in the Appendix.

"23. The complaints which have been made by the several witnesses examined before your Committee are to the effect that Ireland has been suffering, especially during the last four or five years, from the diminution of capital, and the emigration both of labourers and of small capitalists. The losses she has thus sustained are attributed, so far as they can be traced to legislative measures at all, to the repeal of the Corn Laws and to the pressure of Imperial and local taxation. The remedies suggested are of various kinds. Some witness think that Ireland should be relieved of the Income Tax; others, that a greater proportion of the burdens now thrown upon local taxation should be borne by the Consolidated Fund; others, that a larger amount of public money should be expended upon dockyards, or other public works in Ireland; and others, that advances should be made upon more liberal terms than at present for the promotion of drainage and other improvements.

"24. That Ireland has been suffering during the last few years is not to be denied. It is generally admitted that her condition improved rapidly after the great famine of 1846 and the following years, and the improvement seems to have been maintained till 1858 or 1859, since which time she has fallen back again, and is said to be, in some respects, in a worse position than before the famine.

" 25. It has not, however, been shown that this decline has been owing to the pressure of taxation ; it would rather appear that it has been owing to the extremely unfavourable character of the seasons, which for several years past have been remarkably inclement.

" 26. It has not been shown to your Committee that there is any tax now in operation in Ireland which materially interferes with the development of her industry, unless it be the Excise duty on spirits, which to a certain extent checks distillation and prevents the profitable use of inferior grain. The complaints which have been made apply rather to the injury done by the withdrawal of capital than by the adjustment of the taxes; and it is observable that the amount of capital withdrawn by taxation has not been materially larger in the four years of distress than in the four preceding years of comparative prosperity.

App. 14, p. 4. The average annual produce of the taxation of Ireland, in the four years 1854—58 (that is to say, in the four years which followed the extension of the Income Tax to that country) was 6,585,294 *l.* The average produce of the four years 1858—62 was 6,732,589 *l.*, showing an increase of only 2 per cent.; and it is notorious that since 1862 the pressure of taxation has been reduced. It may be observed, also, that while the revenue derived from Great Britain advanced from 56,819,977 *l.* in 1858–59 to 61,360,749 *l.* in 1861-62, showing an increase of 8 per cent., the revenue derived from Ireland in the same period advanced only from 6,438,870 *l.* to 6,792,606 *l.*, or not more than 5½ per cent. That the pressure of the taxation has been more felt in the bad seasons than in the good cannot be doubted; and Mr. Senior probably expresses the truth when he says, 'I do not believe

Ev. 5280. that Ireland is a poor country because she is overtaxed, but I think she is overtaxed because she is poor.'

" 27. It is clear, however, that what Mr. Senior here says of Ireland will hold good of the poorer parts of Great Britain likewise; indeed, it holds good not only of poor districts, but of poor individuals. No system of taxation has ever been devised which presses equally upon all persons; and if it be recognised as a sound principle that we should attempt to graduate the taxation which we impose upon one part of the United Kingdom, so as to relieve it of some burdens on the ground of its poverty, it will be impossible to resist the argument that we ought to carry the graduation further for the purpose of

Ev. 5332, 5333. relieving individual taxpayers on the same plea. Mr. Senior admits that there may be parts of England and Scotland which might set up a case more or less similar to that of Ireland, but he points out that those districts are not so easily distinguishable as Ireland is. Now, if Ireland were to be relieved of two or three millions of taxation on the ground of her poverty, and those two or three millions had to be made up by an addition to the taxation of England, the burdens of the poor districts of Great Britain would actually be increased for the purpose of diminishing the burdens not only of the poorest, but also of the richest districts of Ireland.

" 28. It appears to your Committee that the true lesson to be learnt from the statements which have been made as to the undue pressure of taxation upon Ireland is, that it is important to make every effort for the reduction of Imperial taxation generally. 'A rich country,'

Ev. 5527. says Mr. Senior, 'will always have a very large expenditure.' If the riches of the country were evenly distributed, there might be no objection to this; but the fact ought not to be lost sight of, that they are not evenly distributed, and that additions to expenditure, which may seem small when viewed with referenee to the general wealth of the country, may entail a heavy burden upon its poverty.

" 29. Your Committee have no doubt that the pressure of taxation aggravates, though it cannot be said to have caused the difficulties under which Ireland is now labouring; and while they do not consider that a case is made out for exceptional remissions, they are strongly of opinion that the condition of that country furnishes a powerful argument in favour of a general reduction in the burdens of the United Kingdom. The benefits of such reduction will be most sensibly felt by the poorest members of the community, and therefore will be peculiarly valuable to Ireland.

" 30. It will be sufficiently obvious, from the foregoing remarks, that your Committee do not look to an increase of public expenditure in Ireland as a desirable measure. On the contrary, while they admit that such expenditure might give a factitious appearance of prosperity to particular districts, they believe that, as it would involve an addition to taxation, it would upon the whole do more harm than good. In saying this, they refer to unproductive expenditure incurred for the purpose of distributing a large proportion of the public money in a particular quarter of the empire.

" 31. Your Committee hold that it would be a serious error to expend the money voted for national objects in any other way than that which appears to be best for the nation at large. If, for example, a naval arsenal is required, that arsenal should be constructed at the spot most suitable for it and most advantageous for the nation, without reference to the question whether the expenditure upon it would be specially beneficial to one district or to another.

" 32. As regards what may be called reproductive expenditure, somewhat different considerations apply. It may be desirable to advance public money to promote the improvement of particular districts, in order to render those districts ultimately more capable of adding to the national wealth. A good deal has already been done in this way for Ireland. It appears from a table in the Appendix to this Report, that between 1817 and

1863 advances to the amount of 13,959,125 *l.* had been made for public works in Great Britain, of which sum 7,658,602 *l.* principal, and 3,205,286 *l.* interest had been repaid. In the same period, 26,292,867 *l.* had been advanced for public works in Ireland, of which sum only 12,247,299 *l.*, principal and interest together, had been repaid. These sums are as your Committee understand, distinct from the grants which have at various times been made to Ireland.

" 33. Your Committee do not however, see reason for objecting to this expenditure. On the contrary they are of opinion that any measures which can safely be taken for furthering such advances will be desirable. Their attention has been called to the system upon which loans are now made for the purposes of drainage, and to the further facilities which are said to be desired. Drainage being the improvement of which Ireland chiefly stands in need, your Committee recommend this question to the favourable consideration of the Government.

" The advances hitherto made have been partly for arterial and partly for surface or farm drainage. As regards the former, your Committee desire to call attention to the evidence of Colonel M'Kerlie, the chairman of the Irish Board of Works, who states, in answer to Questions 1034—1050, that while he thinks that arterial drainage, which he considers to be essential to the advancement of other improvements, is not proceeding as fast as is desirable, he thinks it is proceeding as fast as can be expected under the present state of the law, and recommends that, in order to encourage it, a larger proportion, or, as he afterwards says, the whole of the cost should be defrayed in the first instance by advances from the Government. Your Committee need not press this recommendation, as it has been already adopted and made the foundation of a Bill recently introduced into the House of Commons by Her Majesty's Government.

" 34. As regards farm or surface drainage, the only improvement in the existing system which your Committee have to recommend is one suggested by the Marquis of Clanricarde (Ev. 3) and approved by Colonel M'Kerlie (Ev. 1322), that extensive proprietors should be allowed advances beyond the sum of 8,000 *l.*, which is now the fixed limit in all cases, whatever may be the size of the property."

Draft Report, proposed by Mr. *Hankey*, read 1°, as follows :—

" 1. Your Committee have had various accounts respecting the English and Irish debt submitted to them—on the one side impugning the correctness of the accounts as made out by the Treasury, and on the other alleging that the mode in which such accounts have been kept is in accordance not only with equity, but with Parliamentary legislation. Your Committee cannot admit that the mode of stating these accounts by the Treasury is otherwise than correct.

" 2. That in the various reductions and impositions of taxes which have taken place since the Irish Union, whilst on the whole the reductions have been greater in England than in Ireland, chiefly in consequence of the large number of taxes produced which did not affect Ireland at all, your Committee are not of opinion that such reductions have been injurious to Irish interests; nor can they admit that the distress which is readily admitted by all parties now to exist in Ireland has been caused or aggravated by any Acts of Imperial taxation.

" 3. Your Committee have received evidence from persons well informed on such subjects that, in their opinions, much good might be effected by a greater extension of the present system of making loans of public money for the improvement of land in Ireland; and they would beg to submit such opinions to the favourable consideration of Government."

Resolutions to be proposed by Mr. *Longfield*, read as follows :—

" 1st. That from the length of time which has elapsed since the Union of Great Britain and Ireland, and the complexity of the accounts relative to the taxation of the two countries, it is impossible for the Committee now to say, with any degree of certainty, whether the present taxation of Ireland is, or is not, in accordance with the Articles of Union.

" 2d. That the taxation of Ireland has been greatly increased since 1852, while the taxation of Great Britain has been proportionally diminished; and the present taxation of Ireland is oppressive and unjust with reference to the resources of the country.

" 3d. That there should be afforded by the Legislature, from Imperial resources, greater facilities than now exist for useful and remunerative expenditure in Ireland to develop her resources."

Motion made, and Question proposed, "That the Draft Report, proposed by the Chairman, be now read 2°."—Amendment proposed, to leave out from the words "That the," to the end of the question, in order to add the words "Committee do proceed to consider resolutions on the three subjects of reference on which a Report should be afterwards based"—(Mr. *Longfield*)—instead thereof.—Question put, That the words "Draft Report proposed by," stand part of the Question.—The Committee divided:

Ayes, 10.	Noe, 1.
Sir Frederick Heygate.	Mr. Longfield.
Lord John Browne.	
The O'Conor Don.	
Sir Stafford Northcote.	
Mr. Howes.	
Sir Robert Peel.	
Mr. Lowe.	
Mr. Hankey.	
Mr. Banks Stanhope.	
Sir George Colthurst.	

Question proposed, That the words "the Chairman be now read 2°," stand part of the question.—Amendment proposed, to leave out the words "the Chairman," in order to insert the words "Sir Stafford Northcote"—(Sir *Stafford Northcote*)—instead thereof.—Question put, That the words "the Chairman" stand part of the question.—The Committee divided:

Ayes, 4.	Noes, 7.
Sir Frederick Heygate.	Sir Stafford Northcote.
Mr. Longfield.	Mr. Howes.
Lord John Browne.	Sir Robert Peel.
The O'Conor Don.	Mr. Lowe.
	Mr. Hankey.
	Mr. Banks Stanhope.
	Sir George Colthurst.

Words *inserted*.—Main question as amended, "That the Draft Report proposed by Sir Stafford Northcote be now read 2°," put, and *agreed to*.

The Committee deliberated.

Motion made, and Question proposed, "That the Committee do immediately proceed to the consideration of the Draft Report"—(Mr. *Longfield*.)—Amendment proposed, to leave out from the word "do" to the end of the Question, in order to add the words "now adjourn"—(The *O'Conor Don*)—instead thereof.—Question put, That the words proposed to be left out stand part of the Question.—The Committee divided:

Aye, 1.	Noes, 10.
Mr. Longfield.	Sir Frederick Heygate.
	Lord John Browne.
	The O'Conor Don.
	Sir Stafford Northcote.
	Mr. Howes.
	Sir Robert Peel.
	Mr. Lowe.
	Mr. Hankey.
	Mr. Banks Stanhope.
	Sir George Colthurst.

Words *added*.—Main Question as amended, "That the Committee do now adjourn," put, and *agreed to*.

[Adjourned to Friday, 26th May, at Twelve o'clock.

Veneris, 26° die Maii, 1865.

MEMBERS PRESENT:

Sir Stafford Northcote.	Sir Frederick Heygate.
Sir Edward Grogan.	Mr. Hankey.
Mr. Howes.	Sir Robert Peel.
Lord John Browne.	Mr. Lowe.
The O'Conor Don.	Mr. Banks Stanhope.

In the absence of the Chairman, Sir STAFFORD NORTHCOTE took the Chair.

Draft Report proposed by Sir *Stafford Northcote*, read 2°, paragraph by paragraph.

Paragraphs 1–21, *agreed to*, with amendments.

Paragraph 22.—Amendment proposed, to leave out the words "The pressure of taxation will be felt most by the weakest part of the community; and as the average wealth

of

of the Irish taxpayers is less than the average wealth of the English taxpayers, the ability of Ireland to bear heavy taxation is evidently less than the ability of England"—(Mr. *Lowe*).—Question put, That those words stand part of the paragraph.—The Committee divided:

Ayes, 6.	Noes, 3.
Sir Edward Grogan.	Sir Frederick Heygate.
Lord John Browne.	Sir Robert Peel.
The O'Conor Don.	Mr. Lowe.
Mr. Howes.	
Mr. Hankey.	
Mr. Banks Stanhope.	

Paragraph *agreed to.*

The Committee proceeded with the Draft Report, and made amendments by inserting several paragraphs after paragraph 22.

[Adjourned to Thursday next, at Twelve o'clock.

Jovis, 1° *die Junii*, 1865.

MEMBERS PRESENT:

Sir STAFFORD NORTHCOTE in the Chair.

Mr. Howes.	Mr. Finlay.
Mr. Lowe.	Mr. Hankey.
Lord John Browne.	Sir Robert Peel.
The O'Conor Don.	Mr. Banks Stanhope.
Sir Frederick Heygate.	Sir Edward Grogan.

Amendment made by inserting the following paragraphs after the last amendment:

"He has, however, furnished the Committee with Returns, from which it appears—

"1st. That the total amount of accumulated deposits in public savings banks on 20 November 1863, was, for Ireland, 2,071,523 *l.*, and for Great Britain, 38,407,264 *l.*, or 19 times as much.

"2d. That the total amount of deposits lodged in the public savings banks during the last 10 years is, for Ireland, 5,208,151 *l.*, and for Great Britain, 76,255,688 *l.*, or 18½ times as much.

"3d. That the total amount of deposits in the Post Office savings banks, since their first establishment, amounts to 336,594 *l.* for Ireland, and to 7,957,170 *l.* for Great Britain, or 23½ times as much.

"4th. That the amount of Post Office money orders issued in Ireland during the last 10 years amounts to 8,927,380 *l.*, and in Great Britain to 123,172,981 *l.*, or nearly 14 times as much.

"5th. That the gross receipts of railways during the past year was for Ireland 1,518,654 *l.*, and for Great Britain, 29,557,511 *l.*, or 19½ times as much.

"6th. That the yearly interest on Government stocks payable in Dublin amounts to 1,120,134 *l.*, and that payable in London to 21,612,527 *l.*, or 19 times as much.

"7th. That the amount of Probate, Legacy, and Succession Duty, on an average of the last three years, amounts to 212,895 *l.* for Ireland, and to 3,452,666 *l.* for Great Britain, or more than 16 times as much"—(Lord *John Browne.*)

Amendment proposed, after the last paragraph, to insert the following paragraph: "Though it is impossible to ascertain the exact wealth of the two countries, your Committee think that it is evident from the above figures, that the wealth of Great Britain is much more than seven and a half times as much as that of Ireland, which paragraph 21 of this Report shows to be the comparative amount of local taxation, or more than 9½ to 1, which Mr. Chisholm shows at page 11, App. 6, to be the comparative amount of Imperial taxation"—(Lord *John Browne*).—Several amendments made.—Paragraph, as amended, inserted in the proposed Report.

Amendment proposed, after the last paragraph, as amended, to insert the following paragraph:—"As, however, the taxes imposed on England and Ireland are paid, not by those countries, but by the individuals who live in them, as these taxes are imposed either on expenditure or in proportion to income, and very fairly adjusted to the ability of the taxpayer, and as a man taxed according to his ability in a poor country is just as able to bear taxation as a person possessed of the same means or making the same expenditure in a rich one, your Committee attach little value to such proportions as bearing on the question of Irish taxation, or the ability of the individual Irishman to bear it. Your Com-

mittee cannot admit that a country in which no tax oppressive to any individual exists is nevertheless injured and oppressed by excessive taxation"—(Mr. *Lowe.*)—Question, That this paragraph be there inserted, put, and *negatived.*

Further amendments made.

Amendment proposed, after the last amendment, to insert the following paragraph:—"With regard to the income tax under Schedule (A.) in Ireland, it has not been proved to the Committee that the Irish taxpayer enjoys any important advantage in consequence of the tax being assessed upon the net Government valuation of lands and houses, instead of upon the gross rent, as in Great Britain"—(Sir *Frederick Heygate*).—Question, That this paragraph be inserted in the proposed Report, put, and *agreed to.*

Paragraphs 23 and 24, *agreed to.*

Paragraph 25, amended, and *agreed to.*

Paragraph 26, amendments made.

Another amendment made, by leaving out from the words "adjustment of the taxes" to the end of the paragraph.

Amendment proposed, after the words, "adjustment of the taxes," to insert the words, "and your Committee are of opinion that while the withdrawal of any large amount of capital from productive expenditure, for the purpose of applying it to the unproductive expenditure of Government, must always act injuriously in any country, they cannot but admit that it must operate with peculiar force in a country where capital is scarce, and much in demand for the developement of its natural resources"—(The *O'Conor Don*).—Question put, That those words be there inserted.—The Committee divided:

Ayes, 5.	Noes, 5.
Sir Edward Grogan.	Sir Frederick Heygate.
Mr. Hennessy.	Mr. Howes.
Lord John Browne.	Sir Robert Peel.
The O'Conor Don.	Mr. Lowe.
Mr. Finlay.	Mr. Banks Stanhope.

Whereupon the Chairman declared himself with the Noes.

Another Amendment proposed, after the words, "adjustment of the taxes," to insert the words, "and that Ireland, being a poor country, suffers more from the withdrawal of capital from productive expenditure for the purposes of Government expenditure than Great Britain"—(Sir *S. Northcote*).—Question, That those words be there inserted, put, and *agreed to.*

Amendment proposed, at the end of the last Amendment, to add the words "Your Committee, however, desire to point out that if this is true of Ireland, it is true of the poorer parts of Great Britain"—(Sir *S. Northcote*).—Question put, That those words be there added.—The Committee divided:

Ayes, 5.	Noes, 5.
Mr. Howes.	Sir Edward Grogan.
Mr. Finlay.	Sir Frederick Heygate.
Mr. Lowe.	Mr. Hennessy.
Mr. Hankey.	Lord John Browne.
Mr. Banks Stanhope.	The O'Conor Don.

Whereupon the Chairman declared himself with the Ayes.

Paragraph, as amended, *agreed to.*

Paragraph 27, amended and *agreed to,* and to form one paragraph with paragraph 26.

Paragraph 28.—Amendment proposed, to leave out from the words "Ireland is," in line 2, to the end of the paragraph, in order to add the words, "That the effect of the restrictions upon Irish trade for the promotion of English trade, and the long course of penal legislation to which Mr. Pitt, eighty years ago, attributed the backward condition of Ireland, is still felt by every class of the people; and that, even at the present day, the complaints of the general neglect and misgovernment of the country are not unfounded"—(Mr. *Hennessy*)—instead thereof.—Question put, That the words proposed to be left out stand part of the paragraph.—The Committee divided:

Ayes, 9.	Noe, 1.
Sir Edward Grogan.	Mr. Hennessy.
Sir Frederick Heygate.	
Lord John Browne.	
The O'Conor Don.	
Mr. Howes.	
Mr. Finlay.	
Mr. Lowe.	
Mr. Hankey.	
Mr. Banks Stanhope.	

Question

Question put, That this paragraph stand part of the proposed Report.—The Committee divided:

Ayes, 4.	Noes, 6.
Sir Edward Grogan.	Mr. Hennessy.
Sir Frederick Heygate.	Mr. Howes.
Lord John Browne.	Mr. Finlay.
The O'Conor Don.	Mr. Lowe.
	Mr. Hankey.
	Mr. Banks Stanhope.

Paragraph 29.—Question put, That this paragraph stand part of the proposed Report. The Committee divided:

Ayes, 4.	Noes, 6.
Sir Edward Grogan.	Mr. Hennessy.
Sir Frederick Heygate.	Mr. Howes.
Lord John Browne.	Mr. Finlay.
The O'Conor Don.	Mr. Lowe.
	Mr. Hankey.
	Mr. Banks Stanhope.

Paragraph 30, amended, and *agreed to.*

Paragraph 31, *agreed to.*

Paragraphs 32 and 33, amended, and *agreed to.*

Paragraph 34, *disagreed to.*

New paragraph added.

Amendment proposed, That the following paragraph be added to the proposed Report:

"That by the Act 59 Geo. 3, c. 109, s. 66, a sum of 5,000 *l.* a year, Irish currency, was granted by Parliament for the encouragement of the Coast Fisheries of Ireland; and by the Act 5 Geo. 4, c. 64, s. 9, this grant was directed to be applied, to the extent of 4,500 *l.* a year, in the encouraging and assisting the building, making, or repairing of piers or quays for fishery purposes, and not for any other purpose whatever; and the balance of 500 *l.* a year of such grant was directed to be applied in providing materials for the repair of boats of poor fishermen at the ports or places where such piers or quays are or shall be built. By the same Act a sum of 3,000 *l.* a year was granted to Scotland for the same purposes, which grant she still is in the receipt of. By the Act 7 Geo. 4, c. 47, the liberal bounties which had been granted under the Act 59 Geo. 3, c. 109, and 1 Geo. 4, c. 82, were to cease and determine on the 5th April 1830, but this did not repeal or affect the grant of 5,000 *l.* a year under the said recited Acts, for piers, &c., and in aid of poor fishermen of both countries. When this grant was originally made by Parliament, the Commissioners of Fisheries had the control and superintendence of the Irish Fisheries; they were succeeded by the Directors of Inland Navigation; and by the Act 1 & 2 Will. 4, c. 33, s. 106, all the powers and authorities heretofore exercised by the Commissioners of Irish Fisheries and the Directors of Inland Navigation were vested in and transferred to the Commissioners of Public Works in Ireland. The Act 1 Will. 4, c. 54, s. 8, which vested the management of the Irish Fisheries in the Directors of Inland Navigation, also granted an additional sum of 13,000 *l.* for the completion of any piers which shall have been begun before 5 April 1830, but in no way affected or repealed the grant of 5,000 *l.* a year under 59 Geo. 3, c, 109, and 5 Geo. 4, c. 64; the grant of 5,000 *l.* a year, therefore, still continued in force. By the Act 5 & 6 Vict. c. 106, s. 1 (by which the Irish Fisheries are now regulated), the Acts of 59 Geo. 3, c. 109, and 5 Geo. 4, c. 64, are repealed, which clearly shows that at the time of passing that Act, both these Acts were considered to be in full operation: by this Act all Acts relating to the Irish Fisheries then in force in Ireland are repealed, except 'as to the enactments or provisions of the Acts, or any of them, which relate to piers or quays, or assisting poor fishermen, or any powers in respect thereof now vested in the Commissioners of Public Works in Ireland, or any monies applicable to such purposes in the hands of the said Commissioners; but that all such enactments and provisions relating to piers or quays, or the assistance of poor fishermen, and all such powers in respect thereof, or of the application of the said monies applicable to such purposes, shall remain in full force and effect.' The Commissioners of Public Works, under the impression that the grant of 5,000 *l.* a year was terminated by the Act 1 Will. 4, c. 54, omitted to make application to the Treasury for this grant, which has since that time been lost to Ireland, although it is proved by the Parliamentary Return, No. , dated 21st July 1864, that many applications for aid towards the building and repair of fishery piers, and assistance to poor fishermen, had been made to them, thereby showing the necessity for the continuance of this grant. The Commissioners appear not to have taken any legal opinion as to the effect of the Act 1 Will. 4, c. 54, in repealing this grant of 5,000 *l.* a year; but as much trouble and responsibility resulted from its administration, to have assumed its repeal. The Acts 9 & 10 Vict. c. 3, and 10 & 11 Vict. c. 75, for encouragement of the Sea Fisheries of Ireland, by promoting and aiding with grants of public money the construction of piers and harbours, and other works, were occasioned by the famine in Ireland,

and intended to meet the painful and pressing distress at that time prevalent in the country; they were of a temporary character, and had no reference to the purposes to which the grant of 5,000 *l.* a year was intended to be applied, nor do they repeal or in any way affect that grant. It therefore appears that the grant of 5,000 *l.* a year, Irish currency, equivalent to the sum of 4,615 *l.* 7 *s.* 8 *d.*, is still in force, and that a sum of 141,230 *l.* 15 *s.* 2 *d.*, part of such grant, is justly due to Ireland for the erection and repair of fishery piers and quays for the 34 years which have elapsed since the Commissioners of Public Works ceased to apply to the Treasury for this annual grant; and a further sum of 15,692 *l.* 5 *s.* 6 *d.*, part of such grant of 4,615 *l.* 7 *s.* 8 *d.*, is also justly due to Ireland in aid of poor fishermen for the same period"—(Sir *Edward Grogan.*)—Question, That this paragraph be added to the proposed Report—put, and *negatived.*

Question, That this Report, as amended, be the Report of the Committee to the House—put, and *agreed to.*

Ordered to Report, together with the Minutes of Evidence and Appendix.

EXPENSES OF WITNESSES.

NAME of WITNESS.	Profession or Condition.	From whence Summoned.	Number of Days absent from Home under Orders of Committee.	Expenses of Journey to London and back.	Allowance during Absence from Home.	TOTAL Expenses allowed to Witness.
				£. *s.* *d.*	£. *s.* *d.*	£. *s.* *d.*
William Andrews - -	Gentleman - -	Dublin - -	3	5 5 –	3 3 –	8 8 –
John Hoare - - -	Fish Merchant -	Dublin - -	3	5 5 –	3 3 –	8 8 –
					£.	16 16 –

MINUTES OF EVIDENCE.

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MINUTES OF EVIDENCE.

REFORM CLUB PALL MALL

Lunæ, 27° *die Martii*, 1865.

MEMBERS PRESENT.

Lord John Browne.	Mr. Hennessy.
The O'Conor Don.	Mr. Longfield.
Colonel Dunne.	Mr. Lowe.
Mr. Finlay.	Sir Stafford Northcote.
Mr. Hankey.	Mr. Banks Stanhope.

COLONEL DUNNE, IN THE CHAIR.

The Most Hon. the Marquis of CLANRICARDE; Examined.

Marquis of *Clanricarde.* 27 March 1865.

1. *Chairman.*] I BELIEVE your Lordship has had considerable experience both in the arterial drainage, and the local drainage of Ireland?—As regards the local drainage on my own estate, I have had as much experience as the state of the law would allow as to loans; that is, I have borrowed to the whole extent, or very nearly to the whole extent, because I believe now that the whole extent to be given to anybody is 8,000 *l.*; I think before any limitation was imposed I had received 6,500 *l.*; the original limitation was 5,000 *l.* to any proprietors, but I understand subsequently to that, although I have not availed myself of it, it has been extended.

2. The *O'Conor Don.*] It was extended, I think, the year before last?—Yes.

3. *Chairman.*] Are you aware of the extent to which it goes now?—I understand the extent now to be 8,000 *l.*, but the objection to the manner in which those regulations and rules as to these loans are issued still exists. It is a square rule, so to say, made to apply to every estate, without reference to conditions of the particular estate, or to the extent of it, or the means of the borrower. It seems to me that the laying down of a regulation that the same sum may be lent to a man of say 2,000 *l.* a year, and to a man of 22,000 *l.* a year, is rather absurd; speaking generally, the less improved lands are in the hands of the proprietors of old and large estates; the smaller estates of the country are generally those that have been bought in comparatively later years, and are composed of good land, and are in a more improved condition than the old estates. Then, again, it seems to me, as to the conditions under which the money is lent, the position of the individual might possibly be considered; that a young man coming into a clear and unencumbered estate, not bound by any settlements or charges as to property, there might, in such a case, be a discretion whether you would lend him so large a sum as might be otherwise allowed in some instances; whether you would lend to such a person to the full extent that you would lend to a man at an advanced period of life, who was a tenant for life, strictly tied up, and otherwise less in a position profitably to lay out money. It is clear that a man of 50 or 60 years of age laying out a large sum of money for improvements which, however great, could not begin to return a profit for two or three years, would not be likely so to do, if he was charged in the same way as a man from about 25 to 45 years of age.

4. Who would you make the judge of those modifications?—That, undoubtedly, is a very great difficulty, but I think you might, without going the whole length that would be desirable in abstract justice, give some elasticity in the exercise of that power to a well-constituted Board of Works.

5. How are those modifications now made; upon the demand of any one, or according to the caprice of the Commissioners?—It is a considerable time since I applied. I apprehend, however, that it is extremely simple, and, as well as I recollect, not expensive; an application is made to the Board of Works under the Act, the title of which I now forget, but it is well known, for certain improvements which you specify; the Commissioners direct an engineer, in whom they have trust, or who may be in the neighbourhood—a man in whom they have confidence—to make a report, and that sum is then issued in instalments, and, according as your work proceeds, it is inspected from time to time by such an engineer as I have mentioned.

6. Do you recollect what the forms and conditions of that report are?—I think a small advance is made. The engineer must first report that the proposed improvement will really be remunerative and profitable to the land.

7. Mr. *Hankey.*] That is, the Government Inspector will report?—The Government Inspector will report that, and that being so that the money will be well laid out. They then advance

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a sum from 300 *l.* to 500 *l.* in the case that I recollect, and in some cases, I dare say, a smaller sum; the inspector reports that it is well applied, and then another advance is made to enable you to proceed.

8. *Chairman.*] The first advances are made merely for the survey and inspection, are they not?—I do not recollect any advances made previous to works commenced; I am not aware of any instance in which it has been so; it may be.

9. Are the proprietors themselves obliged to make the first advance?—Undoubtedly they must, at their own expense, examine the expediency of the proposed works; but that, I apprehend, would be very light; it would not even be necessary always to employ a scientific person, or a regularly qualified engineer for that.

10. There is a valuation attached to the first application?—Yes.

11. And a statement, is there not?—Yes.

12. Then Government send a man of their own to inspect and verify the application; is it not so?—Yes; it is not always a person sent from Dublin; any person who has been in their employ, and who may be conveniently situated in the neighbourhood, will do.

13. Is the proprietor, then, allowed to carry on the work himself, after receiving the advances in instalments?—I think he is allowed to carry on the works, but he will get no further advances if those works are not approved of; they must be in accordance with the plans specified and laid down, allowing, I believe, all reasonable deviations. I do not recollect any complaint on that account.

14. Is there any complaint as to the rules laid down by the Commissioners for the execution of the work on the part of the proprietor?—I think not.

15. Do the inspections occur periodically, as the work proceeds, by Government officers, or persons representing the Government, and are advances made upon their report?—Yes; periodically, till the whole sum is expended. I do not know whether I have specially mentioned drainage or no; but, of course, the same applies to all work, such as fencing. I believe almost the only works upon which these advances are made are, drainage of land, fencing, and labourers' cottages.

16. Lord *John Browne.*] And farm buildings?—Yes.

17. *Chairman.*] Do you see any objection to the form and manner in which these loans are made, or in the inspection?—No, I think not; the only objection I make is the indiscriminate rule laid down to all estates and to all proprietors, without the power of deviation from it.

18. Is not that caused by Government being unable to advance more than a certain sum, in the whole, which they are obliged to divide among a great number of claimants?—I am afraid the claimants have not been to such a great extent as to reduce the funds very much, as far as I know. I have not of late made any inquiry; but there was, two years ago, a very considerable sum still in the hands of the Commissioners, available for such application. I think it quite necessary and reasonable that there should be a limitation; taking the limitation of 5,000 *l.*, on an estate of 5,000 *l.* a year, it is obvious that a man with 10,000 *l.* a year ought to have at least 1,200 *l.*, 1,400 *l.*, or 1,500 *l.* more than that.

19. Do you think it more satisfactory that the works should be completed by the proprietors who have borrowed the money, or under the superintendence of the Board of Works itself?—Certainly, by the proprietor.

20. With their inspection?—I think he will execute it much more economically than the Board of Works would. It is the business of the inspector to see that he does execute it in such a way as will benefit the remainder man and the estate permanently.

21. Have you turned your attention to the application of loans for the purpose of farm buildings?—Not so much.

22. You have not yourself lent any?—No; I have not applied any of my borrowed money to that purpose. I have seen cases in which it has been done, and I am not aware of any abuse that has taken place under it.

23. Do you know the limitations under which those grants are made?—No; I do not.

24. Do you know whether there is any relation laid down between the value of the farm and the buildings that are proposed to be put on it?—No; I am not aware that there is.

25. As to labourers' cottages, do you think it would be an advantage to have loans for that purpose?—Yes. There are conditions now, I believe, under which money may be advanced for that purpose.

26. And for farm buildings also?—Yes.

27. Or for houses on farms?—I do not think there is any advance for farmhouses; it is only for labourers' cottages, distinctly specified as such.

28. Have you considered whether it would be advantageous to grant loans for building on farms?—That is a point that has been greatly discussed. I rather incline to think it would, but then that would require an authority in which some discretion should be vested, the nature of which it would be very difficult to state; I mean as to whom such discretion should be entirely vested in.

29. Is your Lordship aware that in Meath, and counties where no drainage is required, there has been a strong feeling upon the part of the proprietors to obtain these loans for such purposes?—I am aware of it, in that part of Ireland to which you allude. Lord Athlumney took a great part in it, and has himself explained the benefit that would accrue to that part of the country from an extension of the power of granting loans.

30. But in your own part of the country you are not anxious about that?—No, I am not. I think that labourers' cottages ought to be very much improved; but I have great doubt whether to any great extent the power of borrowing for that purpose would be used very judiciously if it was given; there certainly could be no harm in having it, if it were properly overlooked.

31. Do you think that such regulations would be difficult to arrange?—I think they would be difficult to enforce. I am speaking now of farmhouses and buildings, and I am saying that it would be a very good thing to have power to grant loans for labourers' cottages to which only a small portion of land could be attached.

32. Can your Lordship form any idea at what time drainage begins to pay the proprietor, so as to enable him to repay the instalment?—I think it is impossible for anyone to say, because you may drain a field, which, in the very next year will

will almost completely repay your outlay; and you may, on the other hand, in some cases, drain separate fields, or a whole tract of country which will not repay you for a considerable time; therefore, I think it is difficult to lay down any rule for modifying the time as to which repayments are to be made of the loans that have been advanced. I doubt whether the most skilful engineer or the most practical farmer could do it, I certainly pretend to no such knowledge. It would depend upon the nature of the soil, and upon the particulars with regard to the farm, a particular field as I say, may repay you in one year, and in another part of the farm no advantage will appear for a considerable time.

33. Has your Lordship any objection to make to the rate at which the repayments are made, at 6 *l.* 10 *s.* per cent. per annum?—No; as a general rule I think it is very fair, if you are to have an uniform rate. I think, however, an extension of time might be very well granted, if not a change in the rate of interest demanded under peculiar circumstances.

34. I believe 22 years is the time in which the grant is supposed to be repaid?—The whole loan, I think, is to be repaid in 22 years.

35. Twenty-two years repays both principal and interest, does it?—I think so, at present at 6½ per cent., if I recollect right.

36. Do you think it an exorbitant charge?—No, I do not, in common ordinary cases, but I think a good deal of improvement might be induced and effected if in cases an extension of time were granted to repay. It would of course be an advantage and an inducement to the proprietor if the rate of interest were lower. There is no doubt that the improvement of any part of the country not only gives a direct advantage to the whole country, but to the revenues of the State by the improvement of the land and the improvement of the tillage; that, in an indirect manner, increases the revenue of the State, in some cases very rapidly.

37. Do you not think there is a good deal of land in Ireland which, even with money laid out on it, would scarcely be reproductive at all at that rate of interest?—No doubt it is a large and very serious question. When you begin you may improve your land, but it is a most serious question whether the cost of that improvement will not be so great as that the individual proprietor will not for a long time reap the benefit. That is one of the reasons why I think an extension of time will be an advantage, and in some cases the rate of interest might be lowered.

38. I am speaking with reference to lands which more slowly come to be reproductive?—Just so.

39. But at this moment are there not in Ireland lands not only that are scarcely productive, but scarcely fit for tillage?—If you mean scarcely reproductive of the outlay made upon them, undoubtedly there are. There are lands that have been improved so slightly that it has hardly been worth the proprietors while to do it if it has occasioned him any immediate inconvenience.

40. Therefore, would it not be wise of the Government to look closely and see what the reproductive power would be of the land proposed to be drained by the proprietors?—Yes; and the report of their own engineer is supposed to effect that.

41. Do you not think that of late years there has been a great deal of land drained for the mere employment of the people by the proprietors, without any regard to its future reproductiveness?—I should hardly think, without any regard to its future reproductiveness, but undoubtedly a great deal of labour has been employed in that way, for the purpose of giving employment to the poor, where the amount of profit to be got by the result was not by any means the sole object, or not sufficiently great, to induce the proprietor, if he had not the other inducement of giving labour, to enter upon the work.

42. As to the lands with respect to which this application for loans is made with the view of draining them, is it not often for the purpose of employing them for pasture lands and not for tillage?—I think it is, and perhaps more than it ought to be; that is a question of farming on which I do not pretend to be an authority; but from my observation, what is called the consolidation and improvement of farms, by throwing them all into tracts of grass, has been and is likely to be carried much too far in Ireland.

43. It tends to the emigration and expulsion of the people in fact, does it not?—Yes; and to the emigration and expulsion of people who would be very usefully employed on the land, and who, according to the recollection of my youth, would extract more from the land. I do not mean that they would extract more from the land in two or three years, but in a series of years they would extract more from it than is extracted by the grazing that is now so extremely fashionable. I incline rather, in many cases, to what used to be known in Ireland as Colonel Blacker's system, which was in favour of not having overgrown farms.

44. Will your Lordship state to the Committee your recollection of what Colonel Blacker's system was?—It is some years now since I read his works, or since I had the pleasure of his acquaintance, but I know he used to think (of course, every farm must depend upon the quality of its land); but, I think, taking the average of Irish farms generally, he used to think that from 15 to 30 acres, a farmer might live well upon. I speak of Irish acres.

45. That is a half more than English?—Yes; or even speaking of English acres, although that would be smaller than he would approve of. He thought a man might live very comfortably upon that, and pay a very good rent with an ordinary family if proper attention was given to the land; that he would bring the land to a better and higher condition, and extract more produce from it than larger farmers do in this day. One must always remember that since Colonel Blacker's time, considerable change has taken place; there were not such extensive buildings for house-feeding; steam was not then employed in procuring manure, still less in ploughing, not even in threshing.

46. In point of fact, there has been a good deal of improvement in farming in Ireland since Colonel Blacker wrote?—No doubt; and no doubt also that the farmers of Ireland who have made large fortunes (and there have been several of late years) are in general the men who have been employed in large grazing operations.

47. I fancy in your Lordship's province there are the largest grazing farms, except one or two counties in other parts of Ireland?—I should think so. At the last Ballanasloe fair, which is

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the great western fair for agricultural produce in the autumn, I was credibly informed, that one farmer received for the amount of stock sold at the fair, between 11,000 *l.* and 12,000 *l.*, and I believe that person, a very few years, less than 20 years ago, probably had not a capital exceeding 100 *l.*

48. Is the tendency in your Lordship's part of the country to drain, for the purpose of this profitable farming?—I think so; but these lands are not the lands upon which the draining very often pays the best, according to my opinion. I do not pretend to be an authority upon farming, but from my own observation and from information, I think where you have large grazing farms it is by no means a disadvantage to leave part of the land in a coarse and wet state, which land might be really improved so as to bring forward a better quality of grass. That bit of comparatively coarse and bad land very often in the summer proves to be of great use as an adjunct to the good land: whereas if it were held by itself it would be infinitely more valuable and profitable to drain it. On the other hand, there are still large tracts of grass land partially where you see rushes growing to a great extent, showing that good thorough drainage is still wanted.

49. But you are not of opinion that it is for the benefit of Ireland that there should be this immense consolidation that is going on at this moment?—I do not think it should be carried too far; I think it has gone quite far enough. I know large farms which, in their former divided state, have paid good rents, more than is paid by the present occupants of the land or earned by the proprietors. Those rents were paid for a series of years while the land was, a great portion of it, under tillage, and supported several families. Therefore, I conclude that that sort of spade husbandry and human labour which then took place, and was exercised in detail on those farms, really made the land produce quite as much as it does under the improved system, and with all the improved appliances that large farmers are able to extract from it now.

50. Do you not think that the prices have made a difference in the value of serial crops?—Yes.

51. Has there not been a great difference and falling off in the profits of cultivation?—No doubt, and that must always be taken into consideration. At the times I refer to, the price of corn rose very much higher than it has done of late years; the present price would make a very considerable difference. In many cases, however, to which I refer, it was not entirely by grain that persons paid their rent, so much as by the feeding of lambs and calves.

52. Has not that business fallen off very much?—I have reason to believe that there has been great diminution in the supply of young stock that used to be produced that way; a very serious diminution.

53. Is your Lordship acquainted with the system of arterial drainage in Ireland?—I have seen a good deal of it, and have been connected with it.

54. Have you turned your attention to the drainage of the Shannon, a good deal?—Yes.

55. Is it not one of those things that has been conducted by Government?—In point of fact, by law, it must be so, not merely by the law which gives the whole governance of the river to the Government, but this case occurred, which may or may not be known to this Committee, that in the autumn of 1863, there was an application made to the Board of Works, under the late Drainage Act, by which a part of the country adjoining the Shannon might be divided into drainage districts.

56. That was the first Act, was it not?—It was the Act of 1863, I think. I think it was mainly carried through the House of Commons by Colonel Dickson. It was called the Drainage District Act. An application was made by myself and a large number of proprietors on the middle level of the Shannon, to proceed under that Act to effect a certain amount of drainage which we contended (and shall be prepared to contend if an inquiry should be called for) would not injure the navigation, and not only would not injure the navigation in the broad sense of the term, including what the navigation of the Shannon ought to be, but would not practically injure the existing navigation at the existing depth. We applied for permission from the Board of Works to proceed with that, and that if they objected, they should name an arbitrator according to the rules of the Act. They entirely refused our proposal. They made objections to it, and said it would injure the navigation, and they refused to name an arbitrator by whom it might be considered, and said they were advised by Counsel (although they did not specify the Counsel, still less let us see the case and opinion), but said that they were advised by Counsel that those Acts did not apply to any large navigable river. I dare say that opinion was a sound one; I cannot pretend to controvert it, but that as a fact shows that the proprietors are actually debarred from touching the river at all, and that the Government, represented by the Board of Works, refuse to give any facility or power, and that they will not go into an inquiry; which, I believe, Parliament intended to grant in almost all cases of drainage.

57. Were not these sums for large arterial drainage, on the part of large proprietors, advanced under that Act, and by a combination of whom they obtained power to affect this large drainage?—Yes, that was by the proceedings which took place about 16 years ago. There have been several most useful works executed in that way. Those works were executed entirely by the Board of Works, and afterwards an exorbitant charge was attempted to be imposed upon the landed gentry. In those instances, there were proceedings that led the Board of Works in to an antagonism with Irish landowners, of which the bad effects exist to this very day, I am afraid.

58. Was not that antagonism entirely caused by the failure of the Board of Works to perform their part of the contract?—I do not think they failed to perform their part of the contract otherwise than this. It was certainly understood that the works were to be executed at a cost that should bear a fair proportion to the benefit derived, and the Board of Works so far lost sight of that as was avowed, either before a Committee or elsewhere, but certainly it was avowed by Mr. Mulvany, who chiefly had the conduct of the thing at that time, that these works were works rather in aid of distress than for the improvement of the land. The strongest instance that occurs to my mind was where the original sum was about 53,000 *l.*, that was the original sum sent in as the charge for the drainage, of which, I believe, the ultimate charge imposed upon the lands was about 22,500 *l.*

59. Mr.

59. Mr. *Longfield.*] Do I understand you to say that the original estimate was 53,000 *l.*?—£. 53,000.

60. That was the estimate, was it?—That was the sum attempted to be charged. The original charge advanced for the execution of the work. I do not know what the original estimate was, but the charge attempted to be demanded as the amount of money laid out upon the works, for which the land was to pay, was about 53,000 *l.* Ultimately, upon an investination and examination of the case, it seems that the actual charge was only 22,000 *l.* or 23,000 *l.*

61. Then they did not lay out the amount which was promised?—They had laid it out, but in such a way that they put persons on the works at 1 *s.* or 1 *s.* 6 *d.* per day, who did not do one penny worth of work in the day.

62. Then the amount was reduced in consequence of its being an improper expenditure?—Yes; and because there was a very wise investigation of the real expenditure of the money.

63. Sir *Stafford Northcote.*] What was the date of this?—It was about 1848 or 1849, I believe.

64. In the middle of the distress time?—It was in the time of the distress, and it was not without reason. The Board of Works were quite aware of the necessity of finding labour; and that was one of the inducements to the proprietors to make applications for loans.

65. *Chairman.*] But, as I understand you, originally the assent of the proprietors was given for the drainage, and not for the relief?—Yes; the assent was given for the drainage, which should be executed according to a certain estimate; I do not recollect what that estimate was in that case, but I know that the charge attempted to be imposed upon the district certainly exceeded 50,000 *l.*; and the proper charge was found to be under 25,000 *l.*, which was ultimately adjudged to be the fair value that the lands ought to pay. In consequence of that, without any application from the proprietors, a small drainage in which I, myself, was concerned, was reduced voluntarily by the Board of Works, from a charge of about nearly 20,000 *l.*, or between 19,000 *l.* and 20,000 *l.* to about 12,000 *l.* or 13,000 *l.* We paid for two years the charge at the rate of 19,000 *l.* or 20,000 *l.* It was greatly in consequence of Lord Ross's Committee in the House of Lords that this investigation of the monies laid out was made. The consequence of that was that it created a great mistrust amongst the Irish proprietors as to the want of attention to their interests in works executed by the Board of Works which, I think, has led to unfortunate consequences since.

66. But the proprietors get the value for the amount with which they were actually charged?—Yes, they did. The 52,000 *l.* would have been an absurd extravagance, but I believe the 22,000 *l.* or 23,000 *l.* was money well laid out.

67. Whence arose this distrust; was it from the attempt to charge 53,000 *l.*?—Yes; before the Committee to which I have alluded there were produced a great many complaints from different parts of the country. The Board of Works had said the lands ought to pay the sum they charged. The landlords said that in some cases it would be ruinous to pay it. The charge imposed upon some of the lands under the valuation was as much as the fee simple of the land was worth. For instance, it would be monstrous to suppose that a man having bog-land would have sanctioned a large outlay knowing he was to repay it.

68. Then that distrust was caused by the attempt to charge which subsequently failed?—Yes.

69. And that failed in consequence of the Committee of the House of Lords, did it?—Yes; the Committee of the House of Lords was the original proceeding, and the Government upon that report of the Committee took action.

70. Are you aware, on the contrary, that there are several arterial drainages in which a certain amount has been promised, and that they have failed to go on with the works?—Certainly, I have heard of such cases; I have never had any personal knowledge of them.

71. There are such cases?—Yes; there are such cases, I believe.

72. Sir *Stafford Northcote.*] Do you say by the Government?—The Board of Works.

73. *Chairman.*] Do you know the Inny River, a tributary of the Shannon, where the work has been stopped?—I have not heard of that particular case.

74. But have many works been undertaken where they have stopped short of the work to be done?—Yes, I believe so.

75. Are you aware in the Shannon drainage, in the first instance, it was considered by the Government that the improvement would pay for the works to be done, without any assessment permitted upon the lands adjoining?—Yes, I believe that was so.

76. That was the effect anticipated of that Act, was it?—Yes, the original intention.

77. A subsequent Act gave the right of assessing the lands to a certain amount?—Yes.

78. Are you aware whether that assessment was made fairly upon the counties adjoining, or whether there have been complaints against the fairness of it?—Do you allude now to the general charge over all the counties?

79. To the assessment made on the counties?—I am quite certain it was most unfair; there is no doubt about it. The result of the assessment is specified in the reports, and complaints laid before Parliament prove that with arithmetical accuracy; the results were not obtained on the specified lands. The powers of deviation from the specified works were not to be found fault with, I believe. As a specimen (it is not one on which I should wish to hang practical value, but as a specimen to show the extent to which results were miscalculated.) A report of a subordinate engineer is specified and appended to the final report of 1850 (which report, generally, contains the most gross, false statements, viz., that the works referred to have been executed); appended to it is a report from an under engineer, in which he states that the river is now brought under such complete command that the proprietors will be able to till it, or to graze it, or to irrigate it, to keep the water on or off at their will and pleasure, which land is subject to summer and winter floods just as it was before; not as much, not in the same degree, and because not in the same degree, it is actually injured instead of benefited.

80. Therefore, the result boasted of by the Board of Works was a perfect fiction?—Perfectly so; that I speak of my own personal knowledge.

81. The charge was supposed to be made in the counties upon the land adjoining, as if they had received the benefit?—Just so.

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82. These charges have been extended to a very ridiculous extent, have they not, to lands supposed to have been benefited, and which have not been benefited?—Certainly; the Isles of Arran are the strongest proof; the only way in which the Isles of Arran could have been benefited was this, and this was the reason, I apprehend, applied to them, and I wish to mention it, because in any discussion relating to the Shannon between the Government and the proprietors of the land it has been always cited, and with some truth, but greatly exaggerated, that the boon to the counties was the navigation, and not the drainage; but then, what possible pretence could there have been to charge the Isles of Arran with the navigation of the Shannon? There was a pretence for charging for the drainage, because they said, The rateable acreage of the county to which you belong will be greatly increased in extent and in value, and, therefore, your share of the county charges will be lessened, as you will belong to a much richer county. That was the reason attempted to be put forward; I do not mean to say it was strong, but that was the attempt at reasoning.

83. I have asked you about the Shannon because you know it best, but are not the same complaints applicable to almost all the arterial drainage?—I have heard a great deal of various complaints; I must, however, say that arterial drainage in general has been, in my opinion, well worth the money.

84. But there are complaints of the same character in certain quarters?—There are.

85. Are there not some complaints of the engineering being bad, contrary to principle and rule?—Yes; no doubt the great complaints I have heard about the arterial drainage has not been, not that as a whole the work has not been beneficial to the district, but that the promised results in different parts have failed. Where main drains ran through a farm they have said, Your farm will be made drainable by them, and it has turned out not to be the case; and the farmer in these particular spots complains of the assessment.

86. They complain that they have not got anything for the money they are charged, is that so?—Yes; looking at the work as a whole it may have been worth the money laid out upon it, but individual proprietors have not had the benefit that has been promised them, and which they calculated upon. To take a very large instance, on a part of the Shannon where certain results were promised to the persons who owned the lands, the Commissioners who made the final report stated that the works had all been executed, and they were so confident of their success, that they actually took down the poles which were used as guides to the navigation in the winter, and a very few months afterwards they had to replace those poles because the navigation was as undiscernable as ever in times of flood, only the water was not so deep; but whether the water was two feet deep or six inches only, it came to the same thing, so far as regards the injury to the land.

87. The Upper Shannon has not been drained, I fancy?—No; I have heard a great many complaints, and it is within my own knowledge, because it has been brought to my knowledge by perfectly trustworthy persons, that in some places where large works were designed by the original plans not a farthing whatever has been laid out.

88. Are you aware how the awards as to the payments from the proprietors are made, in what form and by whom?—Yes; I am aware that the Board of Works send down two Commissioners upon the spot; they then hear the complaints, and make a positive award, and in some cases they have an arbitrator, and, I must say, without always listening to the complaints that are made.

89. Are there not a great many complaints amongst the country gentlemen as to the caprice of these awards and the manner in which they are enforced?—Yes, a great many.

90. Is there a power of appeal from these awards?—Not practically, I think, only to the Board of Works. I was not aware of any appeal. I have heard a great deal as to persons being aggrieved, but I never heard of any one who thought it worth while to appeal.

91. You are not aware of the forms of appeal then?—No; I am not at all cognisant of any cases of appeal.

92. But these are what the Irish proprietors complain of in their objections to the system of arterial drainage, are they not?—Yes. I have heard a great deal of complaint about these awards, and the difficulty of getting any redress, but I must also say that a great deal of this was not complaint as against the Board of Works only and their officers, but it was a good deal in consequence of disputes against the proprietors as to their relative portions of the charge, what they should pay, and whoever was worsted by the decision of the award generally complained of it.

93. Are you aware that rivers which have been lowered by the arterial drainage have been handed over to a local commission after they have been said to be finished?—Yes.

94. Have you heard that the Commissioners deny that the work has been finished, and that the proprietors have frequently been left to do a good deal themselves?—I have been told so very often, and in one case in which I was concerned; but I have not instituted any inquiries to be able to speak of my own positive knowledge of the case.

95. Mr. *Lowe.*] I understand your complaint is, that the instalments demanded are too large?—I did not make any complaint; but the improvement I suggested is that, I think, in some cases it would be desirable that the instalments should be made smaller, and the payments separated over a longer space of time.

96. That is the only point you suggest with regard to the present system of drainage, is it?—Upon this ground of inducing people of advanced age, who are strictly tenants for life, to take these loans; of course it is desirable to have permanent improvements of the country, and a man would not think it worth his while to borrow a sum of money where he would have to pay 6½ per cent. for it for the rest of his life, when he would probably not regain his money out of the land.

97. Is that the only reason you give for suggesting this discretionary power of extending the time?—I think there may be varieties of conditions under which property is held, and there may be circumstances in which it would be desirable to give the discretion; it seems to be proved that the proprietors at the present time do not conceive the terms to be favourable to them, as there is still so much money unemployed which would be granted to them, while there

there is so much land that might be benefited by improvements.

98. Can you lay down any principle by which such discretion should be guided?—I think it would require a good deal of consideration to lay down the details; it certainly would not be easy. What I have alluded to, viz., where a man has his estate at his own disposal. I think it would be very fair that he should pay good instalments, because a man in his position may go into the market and borrow money on security, which a person under settlement could not give. That is a point that strikes me very strongly. Then the age of the incumbent, so to term him, is another thing that might be regarded, and the condition of the property, and the extent and capabilities of improvement it required.

99. Would not such a power be liable to the suspicion of abuse and favouritism?—I think it would be liable to a good deal of suspicion. I do not know that it would be so in reality. I am not very anxious for it. I think there would be an advantage. No doubt there would be a difficulty; at the same time the persons who were to exercise this discretion could rarely, I apprehend, have any direct interest in the abuse of their discretion.

100. Would it not be open to that remark that persons of great political influence had had some advantage?—No doubt it might be said that my neighbour had 30 years to pay for his loan, and I only 22.

101. Because it might be said he was on the one side and you on the other, and the Government favoured you?—Yes.

102. Then, I ask you, can you suggest anything upon this point?—I should say that that was an objection that was applicable to all exercise of arbitrary power and discretion.

103. Sir *Stafford Northcote.*] With regard to the distinction between persons having settled estates and estates free, you would propose to charge more to the person who had his estate free than to the owner of a settled estate?—Yes.

104. Would that not enable the tenant for life of a settled estate to gain a benefit for himself at the expense of his successor?—It is so at present; if he could do that in one case he might in another; an arbitrary discretion now rests with the Board of Works, whether the estate will benefit sufficiently by the outlay of the money as to make it desirable that it should be made.

105. Have you ever known instances in which an estate has been overburthened by money being taken up for drainage beyond what was really profitable for the estate?—No; I have known portions of estates certainly where I think the money was unprofitably laid out, and it was a mistake to have laid it out; the only guard is the preliminary report of the engineer; but we know that of various private speculations in land some have not proved remunerative, and they are now recognised as such by the persons who made them. I am talking now of things on a very extensive scale.

106. When you say it applies both to the owner of the settled and of the unsettled estates, has not the owner of the unsettled estates, upon the hypothesis, a greater right to charge his own land, and even to overburden it, than a tenant for life of a settled estate?—Certainly not, as concerns these loans, because the condition on which the loans are given is that his estate shall be improved; it is for that the money is voted and granted.

107. Then, do you think there is sufficient security in all cases that the estate will be improved; or is it not, after all, a matter in which there will occasionally be errors of judgment?—Certainly there will be errors of judgment; but, as far as my observations have gone, they have been very few.

108. With regard to arterial drainage, I do not quite understand to what your Lordship's complaints point: do you think there is any complaint to be made against the present system or against the mode in which that system has been carried into execution in certain cases?—As to the mode in which the system has been carried on, it is more a criticism than a complaint in speaking of arterial drainage, in answer to your question. I do not allude to such great questions as the drainage of the Shannon, but where there has been through a whole district a river created, in some places 10 to 20 miles long, that is what I should call arterial drainage—large streams opened. My objection is more to the mode, certainly, than to the principle.

109. Do you think that there are any measures which either the Government or Parliament could take which would improve the mode in which these works are carried out?—I do not find much fault with the arterial drainage; I think, if anything is done, the proprietors ought to have a greater voice than they have now in the economy with which the works are conducted. I think, as a general rule, these arterial works have been very well done by the Board of Works, but much more expensively than had they been done by the proprietors.

110. The *O'Conor Don.*] Is it the fact that at present there are no arterial works carried on by the Board of Works; have they not refused to undertake them?—I am not aware of their having refused, but I am not aware of any that are going on.

111. They have given it up, have they not?—Practically, they have given it up. If upon that point I may express my opinion, it is that these works have been given up chiefly in consequence of the discontent among the landed gentry as to that very point to which I alluded, namely, the economy and attention to their interests, which ought to have been, and were not, as they think, sufficiently attended to by the Board of Works; that feeling originated at the time I have alluded to, and has been entertained constantly since, that I have always heard it said, that it appeared that the object of the Board of Works was to burden the landowners or the occupiers as much as they could: I am not saying that the feeling is just, I am merely stating an impression which I conceive to obtain, and which has a foundation, I must say, in some works which I think have been very expensively executed, and a much higher charge than was necessary made upon the land.

112. Sir *Stafford Northcote.*] Do you think it possible to organise any system by which the landed proprietors could be brought into co-operation with the Board of Works to carry on this arterial drainage?—I have not considered that sufficiently to say, I have none at hand, but I think a greater degree of trust might be reposed in the landowner in the execution of his works, and greater scope allowed to him in the

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superintendence and control of the labour and execution of them.

113. Perhaps you would be kind enough to describe as well as you can what the present system is, which is that which first sets the undertaking in motion as to the proprietor?—Are you speaking of arterial drainage?

114. Yes.—It is so long back since I had anything to do with it, that I cannot say what would be the present system; but I should think, for an expensive arterial drainage now, recourse would be had to those Acts which were passed in 1863 and 1864, called "The District Drainage Acts." I have not myself had any experience of, or been connected with any application under those Acts; but I have cognizance of a very large work contemplated in a district on the Brusna river; whether that will be carried out or no, I do not know.

115. It is now a reference to this Committee to consider whether any improvements can be made in the system of advance by the Government for works of public outlay in Ireland, and I should like to ask whether, with regard to arterial drainage only, you think there is any other improvement that could be made in the present system besides that improvement which you have suggested, of extending the time of repayment under certain circumstances?—I am not prepared with any plan myself, but I think the proprietors ought to have a better power than they now have of inspecting and controlling the expenditure in detail.

116. And you think that if that power were given, the advances for arterial drainage are of great importance to Ireland?—Certainly; there are whole districts of land that want it, districts which are in a most disgraceful state, and where arterial drainage on a very large scale is required.

117. With regard to the surface drainage, the farm drainage, do you think there are any improvements required with regard to that besides the occasional extension of time?—I cannot say that I do; I think that the works are done fairly enough in those cases; the proprietor is allowed to execute the work himself, and I think that is the right principle to go upon, and the office of the Board of Works is to see that it is efficiently done. In the larger cases of arterial drainage it may be right that the Government should execute the work, but I think that the proprietors ought always to have some control over the detailed expenditure.

118. With regard to the farm drainage, do I understand your Lordship to consider that there should be a diminution of interest, as well as an extension of time in certain cases?—I think it hard to lay down a rule; there may be cases in which it would be just and proper to give both.

119. Would you go so far as to say that money should be lent in any case without interest?—No; hardly so far as that; but there are cases in which it is very difficult to tell what will be, if any, the immediate profit derived from them, although, undoubtedly, they will prove ultimately profitable to the estate. It is commonly understood, for instance, that the drainage of what are called in Ireland bogs, does not pay, but although the drainage of a bog may give no repayment on the bog land, it may serve the estate very much, it may improve the quality of other parts of it and of land near to the bog in a short time, that is, it will give an indirect advantage to the estate which it would be very difficult directly to appraise upon any particular spot of land.

120. But could it be right for the Government, in any case to advance money for a purpose which does not in any sense pay?—I intended by that answer to convey that it did pay indirectly, although it would not have an acreage repayment of the land immediately affected.

121. That is to say, the profit will not arise out of the bog itself, but upon the whole estate?—Yes; it may be a means of facilitating the improvements of other land, which would require an entirely separate outlay.

122. Does that supply any reason why a lower rate of interest should be charged in those cases?—I think it does, because, in such a case, the improvement may affect a good deal of land, besides a man's own estate, and likewise serve his heirs more than himself.

123. What proposal would you make with regard to the reduction of the rate of interest; would you propose that it should be uniformly lowered, or that it should be remitted for a certain number of years?—I think, in a case such as I mean, there should be a lower rate of interest rather, or perhaps both. I will illustrate this by stating a little of the nature of such an improvement, as occurred to my mind upon your question: It was proposed to me, as one means of draining a part of my estate that I wished to improve, to cut an entirely new main river for about a mile and a quarter through a bog, of which bog only about two-thirds, if so much, was my own property; if such a river had been made it would have affected, of course, every part of the bog, and it would have affected the lands that rise immediately above the bog, and would have become a new feature in the country, and, it was supposed, would have created a great improvement. I did not execute the work; but, supposing all the benefit from such a work as that which the engineer imagined would be derived from it, I think that is a case upon which the proprietor ought to have money upon easy terms, in order to execute it.

124. But is not that a case of arterial drainage, rather than farm drainage?—It is; but that would have been wholly and solely on my own land, and wholly and solely at my own cost, and I acknowledge that I should not like to put a work on these conditions entirely under the Board of Works.

125. It is perfectly reasonable, obviously, that in such a case as that, the whole burden of the improvement should not be thrown upon your Lordship, but is it fair that the State should bear the remaining portion, and that your neighbour who gets a considerable amount of benefit, should pay nothing?—I do not think it would not be fair to charge the estate for it; the question is, unfortunately, one that is too common in Ireland, viz.: that the work should be paid for by everybody who could derive benefit from it; the question in such a case as regards the next heir, the remainder man, would be whether his estate had not of itself gained the whole amount of value for which it was fair so to charge that estate; that value need not be contingent upon the question whether other estates were improved, the owners of which were not inclined or perhaps not able to join in it, but in point of fact, if the heir at law gets a good return for the money that has been laid out, and charged upon his property, he would

would have no right to complain because others also were benefited.

126. Assuming that in this case the whole property to be benefited was in the hands of one person, the Government would, according to the present practice, advance the money upon certain terms. You now, as I understand, suggest that they should advance the money upon a lower rate of interest, because a certain part of the property was in the hands of other persons who were not to pay anything?—Because it would effect a general benefit to the neighbouring lands belonging to different persons, and the general improvement of the country; the exact results could not be told; it is evident that by the carrying of a river through a marshy tract of land at the foot of some hills, it must be a very considerable advantage, but the exact amount of that advantage could not well be appreciated at the commencement of the work.

127. With regard to the persons to whom advances are made, are they ever made to tenants with long leases?—Yes, I think so.

128. Do you think it is desirable that advances should be made to tenants with shorter leases than at present; do you consider that any greater facilities should be given to tenants to borrow than at present?—I have never heard of complaints on that head. I think it very desirable that facility should be given to them, but I am not aware that there has been any complaint made of refusals of money.

129. Have you ever heard it said, that land that was subject to the drainage tax sells below the value, as compared with other land which is not subject to the tax?—I have heard persons say that, but I never knew an instance of it; and I must say, that in letting land it does not seem to make so much difference as might be supposed, although tenants of course do rather exaggerate the effect of the tax upon them.

130. Do you suppose, if there was a larger amount of money placed at the disposal of proprietors for drainage purposes, upon the present system, that more would be used than is now used?—Yes, I do; because, as I have already said, in most parts of Ireland the lands that are evidently most in want of improvement are most of them parts of large estates, and considerable works might be undertaken if more money was granted for them. If a man of large estate who is not, however large his estate may be, in a condition to lay out money upon improvements, without inconvenience to himself out of his own income, if such a man is to only have 5,000*l.* for these improvements, he will lay it out in draining and fencing-in those parts where he will get the quickest return, but he will not lay out money upon larger improvements upon a worse quality of land, and, to a great extent, because he would be longer in getting a return.

131. Do you think that the borrowing and expenditure of a large sum upon drainage tends to the consolidation of farms and laying them down in pasture?—Upon draining and fencing, certainly. In consolidating farms, a great deal has always to be done in fencing and in the removal of fences. I believe the removal of fences is allowed in the borrowing of money.

132. Then the effect of any stimulus that might be given by the Government to the expenditure of money for this purpose by Irish proprietors, will be to promote the consolidation of farms, and the conversion of tillage lands into pasture, and so rather to promote the depopulation of which we have heard than to retard it?—Yes; that is provided the Government Inspector reported that it would improve the estate and the value of the land, which would always be an open question.

133. But, as a general rule, will not a landed proprietor who has made himself liable for any large sum for the improvement of his estate, be desirous to consolidate his farms, and to bring him tenants with larger capital, who are able to pay him an advanced rent to make good to him that outlay?—No doubt he would be inclined to do so if it did bring him an increased rent, but that is one of the questions whether he would, from the tenants he put into these large farms, for a length of time have an improved rent. I say that, because the feeling is not the same at present that it was four or five years ago upon the question of these consolidated farms, and the profits are not the same. I know an instance where a friend of mine, a man of a large estate, profited by letting at that time two large farms to good and responsible men upon leases. I think it was five years ago, and he told me himself last year that he calculated that their losses for the last three years would probably for some time to come be about 7 *s.* per acre, according to present rents and prices; and I know practically that large grass farms which were previously eagerly sought after, have been to let in my own county within the last 12 months, and there has been some difficulty found in getting good tenants for them.

134. Do you suppose that a large proprietor, having the bulk of his land let in small farms of from 15 to 20 acres, would be able, if he laid out a large sum upon drainage, to get from the numerous small tenants a sufficient increase of rent to pay the interest of the money?—Yes, upon a well managed estate he would; and I am glad to say that that class of tenants throughout Ireland generally, so far as I know, are becoming very much alive to the advantage of draining (although they are still negligent in keeping drains in repair), and they themselves spontaneously offer in many instances to join the landlords in making drains and making fences.

135. Is the money laid out with regard to fencing, chiefly in making or repairing fences?—It generally is in repairing fences which have fallen into decay.

136. Is it found necessary to borrow money to any great extent for work of that kind?—Upon a large estate the land is often subdivided, and in cases such as we are talking of, of small tenants, there is a very great and useless extent of fencing in proportion to the area of land.

137. Do not the tenants themselves keep up the fences?—They do; but there are constant disputes, and there are boundary fences, and fences are sometimes of such importance that really the making of a good substantial fence is a very great improvement to the value of a farm.

138. Lord *John Browne.*] Both for small and large tenants?—Yes, both for small and large tenants.

139. Sir *Stafford Northcote.*] What is the system in which that money has been employed?—I have never known cases in which money has been borrowed in conjunction with the tenant more than this: a tenant will allow a small increase of rent; he will take a farm which he would otherwise object to if it was not put in proper repair as to fences. This objection to taking

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taking a farm refers rather to the large grass farms. Before taking these grass farms a tenant inspects the fences minutely; in many cases the fences are very expensive, and require money to be borrowed.

140. There is power to raise money for farm buildings, but is it not the case that the Act is limited to farm buildings and does not extend to farm houses?—I believe so, and I think, properly.

141. You believe money cannot be advanced for farm houses?—I think it is better not to advance it for farm houses.

142. Lord *John Browne.*] Are you aware that where application is made for a loan for farm building where no dwelling house already exists, the Board of Works make it a condition that the dwelling house should be built at the expense of the proprietor, the cost of which should be one-third the cost of the amount advanced for the farm building?—No, I am not. Do you mean that the farm house is to join the farm buildings?

143. It must be built upon the farm; need not adjoin it?—On some part of the farm.

144. If one does not already exist?—No, I was not aware of it, and I do not think it at all a wise thing.

145. Sir *Stafford Northcote.*] Do you consider the advances for farm buildings are much required?—I think they are desirable.

146. Are you aware whether they are very much used?—I believe such advances, as far as my own knowledge goes, are rare.

147. Supposing that the landlord applied for an advance for farm buildings, would there not be much more difficulty in making the Government officer understand the advantage of these farm buildings to the farm than the advantage of the training?—I think so, from the buildings not being so generally estimated in Ireland as they are in England and in Scotland; but I should think it would be rare that any advance for farm buildings would be sought for, except in conjunction with the general sum for fencing and draining; it may be that in a case of a single large farm or of a certain number of farms, it would be the part of an application for a loan, not the sole ground.

148. What I meant to ask was this, do not you think that, in the case of fencing and farm buildings, it must be much more difficult for a Government officer to exercise inspection, and see that the money was advantageously laid out, than in the case of draining, which is a comparatively simple operation?—Of course it must require more knowledge of farming; the other is a simple question of engineering. I don't know how far the Board of Works would interpret their power for advancing money for farm purposes; whether, for instance, they would allow a steam engine to be erected.

149. Do you think it desirable that any greater power should be given them for farm purposes?—I think so; presuming that a steam engine was made a fixture, or in any way attached to the property, I think it would be a fair matter for advance.

150. Are you not aware that it has frequently happened—certainly in England, and probably in Ireland also—that enterprising farmers have often expended very large sums upon excellent machinery, and upon other improvements, which have been practically thrown away; that is to say, that they have incurred a much greater expense in putting up very perfect machinery than the profit of that machinery would warrant?—No doubt.

151. If a man may do that with his own money, would there not be much greater danger of his being with borrowed money supplied to him under the sanction of Government?—No doubt; and I think it would require very nice consideration and examination on the part of the officer of the Board of Works, before the sanction of the Board should be given to these outlays. At the same time, when you make these loans with the view of improving the condition of the country generally, I think you must run these risks. Although failures do take place occasionally, you must endeavour to combine, as you best may, the proper interest of the heirs in remainder with only fair charges on his estate and land. As far as my own observation goes, I have seen a great deal of money laid out that I think was, as you say has been, found in other places more or less wasted; at least, it has not produced an immediate profit.

152. Do you think it possible so to organise a Government department that they could really put a check upon the wasteful expenditure of money upon farm buildings and farm machinery?—Yes, I do; I think they have already checked very considerable wasteful expenditure in the loans for draining and other matters, and I think the same would apply to machinery which I should be very chary in admitting.

153. Are there any other purposes for which you think Government loans might be usefully supplied to Ireland?—I do not recollect at this moment whether in any case a mill-power is allowed to be erected. I think that that might be a useful purpose for which to grant loans. Considering how wet a country Ireland is, it is astonishing that there is not more water power in Ireland than there is; but a great deal of what there is is wasted, and it often would be usefully applied upon farms for the purpose of scutching and sawing mills and for almost any purpose, and those are precisely the sort of buildings which I should think it would be best to encourage, in order to make use of this water-power to erect a mill, which mill should at once thresh, and winnow, scutch, &c.

154. With regard to the fisheries, do you think any advance might be profitably made to the encouragement of fisheries, either for the erection of piers or other purposes?—I presume you are alluding to sea-fisheries. I think, as regards piers, that might be so. You allude to the proposition of allowing advances to individuals for piers, to be repaid by loans upon the boats.

155. It was a suggestion made by one of the witnesses before this Committee last year, that advances might be very properly made for the erection of fishing piers at fishing stations. I don't think the witness developed his ideas, and I rather wished to know if your Lordship had considered the subject or had any suggestion to make upon it?—I should think it would be of advantage on some parts along the coast, where Nature has given opportunities; a very small sum might sometimes make a valuable pier for small boats, which would be of considerable use. I have seen piers of that kind on the west coast, near Galway.

156. The *O'Conor Don.*] I think your Lordship stated that you were not aware that the Board

Board of Works has determined upon undertaking no arterial works in Ireland?—No; I had not recollected, and do not recollect any positive determination of the kind.

157. But, supposing that to be the fact, and it was stated in the House of Commons officially by the Government that it was so, do not you think that Colonel Dickson's Bill in 1863 was introduced rather to meet a case like that arising?—I presume it was.

158. You are aware, I presume, of the details of the Bill known as the District Draining Bill?—I have a general knowledge of it.

159. You mentioned, I think, that in your own neighbourhood there was an endeavour to form a district under that Bill?—Yes; I heard a good deal of it; I have not been in any way connected with it, by property or otherwise.

160. Supposing we take it that the arterial drainage of the country could now be carried on practically under the Bill of Colonel Dickson, do not you think it would be very advisable that these District Drainage Boards should have power to borrow money to carry out these works in the same way the proprietors have for carrying on similar works upon their own property?—Certainly I do; and I imagine that the power to borrow is in that Bill.

161. The power in the Bill is to the amount of half the cost of the works; do you think it would be very advisable that that power should be extended; that the Board of Works should have power to lend a greater amount than half?—Certainly I do; I see no reason why they should not have power to lend to the whole amount, taking care to have control over the expenditure, viz., to see that the money lent is properly laid out upon the work.

162. You are aware, under Colonel Dickson's Bill, there is the same controlling power of inspection, and the power of seeing that the works are remunerative and properly carried out?—I see no reason why the limit you mention should be imposed.

163. You stated, I think, in answer to the Chairman, that the first Act passed with regard to the improvement of the Shannon, it was intended that those improvements should pay for themselves, and that there should be no liability on the counties to contribute; is that strictly the case?—I do not think that is exactly the case of any Bill or Act, if you allude to the Acts of 1834 and 1835, but the idea was often discussed.

164. Yes, I do?—Those Acts were in great part intended for navigation; it was intended that there should be a large grant for navigation, combined with drainage.

165. And it was also intended that should the amount of money levied in the shape of tolls not come up to the amount, the deficiency should be met by a charge upon the counties?—Precisely so; and it was supposed that gradually the cost would be repaid partly by the revenue derived from the navigation and partly from the drainage, and the counties derive great advantage from both; but as regards that point, a curious statement was made by the Chairman of the Grand Canal Company the other day, and in speaking upon the amount of tonnage between Limerick and Dublin which goes upon the Shannon, that a very small portion indeed of that tonnage, and a very small portion of freights carried on the Shannon, are freights that at all affect the counties that have paid for them; he said, and it is the fact, I believe, from other information I have received, that the great part goes direct from Limerick to Dublin, and therefore the counties who are so charged have practically little or no value for the navigation which they have been told by the Board of Works was the great object for which they were taxed; therefore, as they do not get value from navigation, and certainly they do not from drainage, they have confessedly paid the tax without any substantial remuneration.

166. Lord *John Browne.*] Is it not the case that a number of artificial dams were put up in the Shannon for the purpose of creating the navigation?—No doubt of it. The original scheme of the Commissioners provided for the lowering of the bed of the river, and also provided outlets for the water in flood times at various places; but the Commissioners finding, from the manner in which they laid out their money at the lower parts of the river, that when they came to the middle and upper part they had not enough to execute the original plans, they, instead of sinking the bed of the river, which was the natural principle on which to treat it, both for navigation and for drainage, raised the surface of the river by simple dams, in order to provide for what they considered to be the requirements of the navigation, and these cause or aggravate destructive floods. If they had kept the surface to the level contemplated by the Commissioners who laid out the designs for the improvement of the Shannon, and sanctioned by the Act of Parliament, the floods which are so mischievous would not occur.

167. The effect of that is to have done an immensity of damage to the land upon the Shannon and other rivers, is it not?—Yes; but I look at it not with reference to the damage done, but to the obstacle presented to the carrying out of the drainage of vast tracts of country; no matter what money a landlord may be inclined to spend, of his own money or by means of loans raised, he cannot improve his land so long as those impediments are maintained by the Government; and the improvement of the upper part of the tributaries and of the Shannon, would, if they were practicable, tend to increase the injury to the land at the lower part of those tributaries and of the Shannon—they would send down greater and more rapid floods.

168. At the time that was done the navigation of the Shannon was of far greater importance then, because no railways existed?—Certainly; it was supposed at that time to be of so great an importance that by reference to "Hansard" you will see that Sir Robert Peel objected to it upon the protection principle, that it was a hardship upon the farmers and people of England to pay for facilities to bring Irish corn to compete with them in their own markets.

169. Have you formed any estimate of the present value of the Shannon navigation, and the amount of damage done to the land by maintaining that navigation?—As to the amount of value, it was stated by the Chairman of the Grand Canal Company that it conveys 29,000 tons.

170. Mr. *Hankey.*] For how long a period?—Annually, and we may presume, from what I have already said, that the greatest proportion of it goes the whole length, although not, of course, the whole between Dublin and Limerick; that seems a very small sum, but there is now a railway direct from Limerick to Dublin, and other

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railways now constructing will give more facilities for conveying goods of all kinds.

171. Lord *John Browne.*] Can you form any idea of the amount of damage done to the lands by these artificial dams?—That is an extremely difficult question to answer; it is, what would be the extent of benefit by a better regulation of the river. I think Mr. Bateman puts down the lands as directly flooded, and from which he would propose to remove the floods, at 19,000 acres, but that, of course, only includes the lands immediately adjacent to the river, and which are immediately affected by floods. Most of this land is of a good alluvial soil, and would be of a very valuable character if it were relieved of these floods. The floods, when they were of a different character before the works of the Shannon were done, in many parts were more beneficial than they now are; the land has been in some places injured by the diminution of the time during which the floods rest upon it in winter: but that 19,000 acres would represent a very small part of the lands that would be affected by the regulation of the Shannon water; the amount of those lands it is very hard indeed to say; the whole area of the catchwater basin is over two millions of acres, and the lands that would be affected have been differently estimated by different engineers at from 100,000 to nearly 300,000 acres. I should not dare to say how far these calculations are correct, but no doubt all the tributaries, some of them small rivers having no known name, for a long way up are affected, and many of them are at present no longer, what they once were, navigable, in consequence of the state of the Shannon; that is, they silt up at the mouth. The navigation I refer to is of course the navigation of a very small and local importance, but it is still a convenience to the people, and of considerable value to the farms.

172. Does that 19,000 acres include the land on the borders of the Suck which is damaged?—Not at all.

173. Nor the other tributaries?—Nor, I apprehend, the other tributaries for any distance beyond the level of the Shannon itself.

174. The damage to the land up the Suck is enormous, is it not, in consequence of these dams, is it not?—There is an impediment on the Suck which is required to be removed, I believe, two or three miles only from its mouth into the Shannon, and the Suck goes for many miles up through the county of Roscommon, affecting a great number of smaller tributaries.

175. As to the loans for land improvement, you stated that the money was repaid to Government by instalments, at 6½ per cent., for 22 years, I believe?—I think those are the terms.

176. Is not that allocated this way, 3½ for interest and 3 for Sinking Fund?—So I believe.

177. Would it not be a boon to the proprietors and tenants if, leaving the interest at the same amount, 3½ per cent., the Sinking Fund was made 1½, making the total repayment at 5 per cent. instead of 6½, and for a longer period of time?—Certainly; I have alluded to that in what I said as to the extension of time.

178. In the case where a tenant gets a landlord to join him, he would prefer getting it at 5 per cent. instead of 6½, I suppose?—Of course.

179. He would not then seem to have to repay the whole loan, whereas under the 6½ per cent. he would?—Yes.

180. Do you think that would be a great improvement?—I think it would; and it would be no practical hardship on the heir.

181. You were asked whether it would not lead to a great deal of jobbing, and suspicion of jobbing, if it was made optional in the Board of Works to grant an extension of time in some cases and not in others; would not that objection be entirely removed by making it optional with the borrower whether it was repaid by instalments at the rate of 5 per cent. instead of 6½?—I think it would.

182. Mr. *Banks Stanhope.*] I think you said there ought to be some improvement in the Shannon?—Yes.

183. Are you at all aware what extent of money would be wanted for that improvement?—There are various estimates I think, all of which, in my humble opinion, are exaggerated, and not unnaturally exaggerated beyond the absolute requirements of the case; I say not unnaturally, because engineers always, of course, wish to do everything very completely, and in the most perfect manner, but in such a case as merely affording an outlet for water, regulated by sluices, I think an approximation to perfection would suffice, and my own opinion is, that a greater expenditure than is absolutely necessary has generally been proposed. I may mention one instance, that of Killaloe. Mr. Bateman proposed works that would cost 20,000*l.*; there my own belief is sustained by persons of scientific and engineering knowledge, that almost all that would be required, certainly a vast amount of relief would be obtained by the expenditure of 6,000*l.*

184. Do you believe that the Shannon could be improved by such a sum of money as would enable the landlord to repay the interest and capital of it?—I do not think it would be quite fair to charge the whole, but in the instance I have mentioned of 6,000*l.*, that sum could be very well repaid by the landlords of all the lands upon the level that would be affected.

185. Is it a large tract of land?—It would be some thousands of acres.

186. I think you said there was something like 19,000 acres near the Shannon that were really damaged by its present state?—That were annually flooded; I take that statement from my remembrance of Mr. Bateman's Report; those 19,000 acres are, I am sure, all above Killaloe; there are other lands below, but I think he refers by that number to the lands between Killaloe and either Athlone or Roosky.

187. To what extent do you think this comparatively small sum of money would benefit the land, to any considerable extent?—More than the same amount annually.

188. Mr. *Longfield.*] In point of fact the Shannon is locked all up to Portumna, and the improvements have cut that all down?—Yes; I think as to that portion of the Shannon, it is very difficult, for an unprofessional person especially, to make an estimate of the advantages to be gained by any one improvement; for this reason, some lands would perhaps be actually deteriorated by it, they are worth very little now; a few others would be very greatly benefited, but there are some lands now of which the value is increased very much by the floods, such as they still are. Then we come to the question, whether in their improved and dry state they would be of higher value than they are at this moment; but that applies only to a small quantity of land. It has been stated by the Board of Works once

or

or twice, as evidence of the benefit their works had done the land, that the average of days upon which the water rested at a considerable depth upon what we call callow lands, subject to flood, was, before their works, in round numbers 120 or more days in the year, and it is now only about 40 days; but that shows not how much they improved, but how much they deteriorated these lands, because of the first number of 120 days the water rested upon the land perhaps three winter months consecutively, and thus gave a great alluvial deposit; the consequence was always very rich meadows of large value, lands used to let at five and six guineas an acre; but the resting for 40 days keeps the grass of the same bad quality, and prevents any other use being made of the land, but it does not give the crops that it did; the consequence is that the lands which did fetch the price I have named now fetch from 30*s.* to 3*l.*

189. Are you quite certain that the not allowing any winter water to come upon the land would disimprove it?—I say a small portion would probably be disimproved, and that makes it so hard to make the calculation of the value obtained, because a small part of these callow lands—but I think only a small proportion—would be deteriorated: I do not think the greater part would; they would become sound land for arable and grazing purposes.

190. Are you aware of any proposed plan by which the Shannon could be improved at a sum of money which would enable persons to repay over a number of years, say 44 years, the interest and capital?—I think that might be done.

191. You believe that it might be possible for Government to lend a sum of money with the certainty or the extreme probability of a repayment over a greater length of time of the interest and capital?—I am aware that there would be a strong feeling against repaying the whole, because people think there ought to be money granted as a compensation for the large taxation they have undergone; but, in point of fact, I have a very strong opinion that the land improved could pay it in that sort of time, 40 or 50 years; at the same time it would be very difficult to applot the taxation.

192. I think you mentioned before, that in the redistribution of the sums to be paid, the manner in which it was done caused great discontent at the apportionment of the charges?—Yes, partly; and the amount also.

193. Can you suggest, with regard either to the Shannon or any future ulterior drainage, any new scheme by which the landowners could have more power in distributing the charges upon themselves?—Not easily; but I think one might be devised. I attribute much of the discontent that has existed to the little pains that appears to have been taken by those who have made these awards to ascertain the facts of each case.

194. To what degree would any large improvement of the Shannon destroy the navigation?—My opinion is, that it would not destroy it at all. I think it would be advantageous, certainly, to lower the depth of the water provided at all seasons. I think the depth of water is unreasonable, looking at the depth required in all the other important navigations of the civilised world; the only excuse for keeping it up that I have heard, was made by the chairman of the Grand Canal Company, which was, that the locks were not long enough for such boats as plied upon large and important rivers; the locks being shorter, they say they require a great depth in the boat for their steam-engines and cargo.

195. Would it be felt to be a great objection to deteriorate the quality of the navigation if you improve the drainage of the adjoining land?—Certainly not, in comparison. At the same time I should be sorry to see the navigation destroyed or materially injured; but I think the navigation of five feet all the year round would be amply sufficient for all the purposes of the Shannon navigation; and supposing even that there was a cessation in dry summers for, say two or three weeks, the importance of such a cessation of the navigation would be very slight; in point of fact at this moment it is not correct to say, as has been said, that the navigation is kept up all the year round, irrespective of the weather. The impediments in the course of the Shannon, of which we have spoken as impeding the drainage and other works of the Shannon Commissioners, cause tremendous currents which do impede the navigation very seriously, and in point of fact the new navigation of the Shannon at Meelick is not practicable during a considerable part of the winter, in consequence of the stream, and such boats as go up the river have recourse to the old passage made before the works of the Shannon Commissioners. I think that practically any improvement of the Shannon for drainage purposes would lead to a considerable improvement for navigation purposes.

196. Mr. *Finlay.*] I wish to ask your Lordship about a description of drainage to which we have not referred at all. I allude to what we call in Scotland, the open sheep-drains upon natural pasture land. I think there are some in Ireland, are there not?—We do not in general approve of open drainage.

197. I am speaking of sheep pastures?—They are frequently made so in Ireland.

198. Does the Board of Works advance money to facilitate their construction?—Yes; open main-drains are a part of their system; but I think they are a larger kind of drain than you mean by what you term sheep-drains, which is not a term used in my country, and therefore I may be mistaken; they do grant money for open drains, but not of the class, I think, that you call sheep-drains.

199. Is your Lordship aware that in Scotland the natural pastures have been supposed to be very much improved by these sheep-drains?—Yes. Although I have not been much in Scotland I have seen them, and they effect an improvement which is evident to the eye of anyone.

200. Do you think that any advantage in Ireland would be derived if the same system were adopted under the sanction of the Board of Works?—That description of drain has been used by large proprietors in many parts of Ireland, although not extensively, and they have been of great use; but I should suppose those drains do not require such an expenditure as would necessitate an application for a loan from the Board of Works.

201. I think you mentioned at the beginning of your examination, that the supply of young stock, both of cattle and sheep, had greatly diminished of late years in Ireland?—By the diminution of small farmers.

202. Was it entirely owing to that?—Yes; such small farmers as I was then speaking of used to raise from two to five lambs, and keep them till they were a year old, and then, as the small fairs

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that go on constantly throughout the country in the autumn and winter, the larger farmers used to pick up very good healthy hardy stock for the purpose of putting upon their better lands.

203. Then you attribute the diminution entirely to the change of small farms into large?—Yes, and the diminution of the population.

204. Mr. *Hankey.*] I wish to ask you, with reference to a question that I understood you to answer to Sir Stafford Northcote, did you not say that you considered money might be advantageously employed in advances towards the erection of mills?—I think so; not for the purpose of corn flour mills, but rather for general agricultural purposes.

205. I think you alluded to scutching mills?—There is not a sufficient quantity of flax in the part of the country to keep scutching mills long going, but I have known scutching mills in Ireland (not in the North) to have more work than they could do; that is, that people who would have had recourse to scutching mills if they could, were obliged to do it by hand, in consequence of not having a mill free to take their flax; I think very moderate power does for scutching mills. I think it would be a great advantage to increase the quantity of mill power in many neighbourhoods, and to increase the number of small mills, which may be erected at a very cheap rate in Ireland, which would do for scutching and sawing.

206. And you think that the public money might be advantageously employed that way?—I think so quite as much as any other kind of buildings attached to a farm.

207. But if the public money might be advanced for scutching and sawing mills, why not for corn mills?—I should not necessarily object to corn mills, but I apprehend it would be the purpose of the State to prevent anybody going into a general miller's speculation with borrowed money; this money is generally supposed to be for the improvement of land; now of late years the milling interest, that is the flour mills, have suffered very much in Ireland; they have not been in a flourishing state, I apprehend, for some years.

208. You think the public money might be advantageously used in restoring the position of those mills which have not been hitherto flourishing?—I should not like to grant it for corn mills; I think that would be encouraging a branch of manufacture rather than agriculture; but in the erection of a mill, while I would make it a condition of any advance of money that there should be gear devoted to scutching flax, and sawing timber, and purposes of that kind, I would not exclude it from grinding corn.

209. You do not think it would be unadvisable to advance money for mills, even if used for corn mills?—No; I said not for corn mills, in addition to the other operations.

210. Why would you exclude other mills for manufacturing purposes generally?—Because I understand we have been talking of loans for the improvement of land. A friend of mine has a project, which he hopes will meet with the favour of Government, for erecting a great number of manufactories, for which mills would be required, throughout Ireland. Such a plan, no doubt, would do a great deal of good to the country; but it is a project which I doubt whether the Government would assist by loans.

211. But you think there will be no objection, upon principle, to advancing money for mills for any purpose?—I did not say I had any objection to it; I only said that I understood we had hitherto been discussing the question of land improvement.

212. As far as the general welfare of Ireland is concerned, you see no reason why public money should not be advanced for any mills?—No doubt in a country where capital is very scarce it is an immense advantage to have that facility for obtaining capital afforded; it might be of great advantage, and might ultimately alter the condition of Ireland immensely.

213. Do you see any objection to the public money being advanced to Irish landlords to enable them to pay off the mortgages upon their estates?—You mean, of course, upon more advantageous terms, because the mortgages would of course remain on the estate.

214. Upon more advantageous terms, lower terms than now?—I do not; of course I naturally feel it a very absurd restriction imposed upon trust money, sometimes by eminent persons in their wills, against investing money on Irish security, and I think it would be very wise for the State to show that it had no such apprehension.

215. Do you think that money might be advantageously employed so long as it was advanced upon security; I mean, do you think that public money might be very wisely advanced in paying off mortgages upon Irish estates at a lower rate of interest?—I think it might. Upon reference to the Act of 1860, the 26th & 27th Victoria, c. 28, which has already been referred to, I see that money can be advanced by the Commissioners, and the interest thereon is charged at the rate of 4 per cent. and not 3½. I think it is only reasonable that that money should be advanced even at the rate of 3 per cent.

216. The *O'Conor Don.*] That is the same rate at which money is advanced to private proprietors for draining their own lands, is it not, as you will see by the next clause?—Yes; and I see further it is payable by an annual rent-charge of 6 *l.* 10 *s.* for every 100 *l.*, and so on in proportion for the term of 22 years, so that, in point of fact, the interest charged to individuals on loans for improving their lands is 4 per cent., and not 3½.

217. Lord *John Browne.*] And the Government can do it cheaper, so that they actually make a profit of it?—Yes.

218. Mr. *Hennessy.*] You have spoken of Lord Rosse's Committee; you are aware doubtless that that Committee led to the issue by the Treasury of the Minute appointing Sir Richard Griffiths, Sir William Cubitt, and Mr. Rendle, to make a special report on the subject?—Yes.

219. In corroboration of what your Lordship told us, I would ask you to look at that table given in; is that the original estimate of the Board of Works, and of the first cost of the eleven drainage districts referred to? I will only take the three first—Kilbeggan, King's County: what is the original estimate?—£. 8,511.

220. Being 1 *l.* 14 *s.* 2 *d.* per acre?—Yes.

221. The estimated cost you will see on the next page, 27,355 *l.*, being a cost per acre of 3 *l.* 18 *s.* 9 *d.*?—Yes.

222. The second district is Brosna, King's County; the original estimate there is 45,330 *l.* 6 *s.* 11 *d.*, is it not?—Yes; then comes the case to which I referred from memory only, and in which my figures were not correct, although

although my statement generally was, namely, the Dunkellin drainage, County Galway: the original estimate for that was 19,318 *l.* 14 *s.* 10 *d.*; the estimated cost for which, for those who subscribed to the drainage, was 19,000 *l.*; but that, we were subsequently told, would be increased to 45,000 *l.*, and we were afterwards attempted to be charged 56,450 *l.*, we having originally agreed to charge upon the lands to the amount of 19,000 *l.*

223. Will you give the sum total of the eleven districts?—The original estimate for so much of the country was 202.958 *l.*, and the estimated cost which the Board of Works wished and intended, if they had been allowed to levy on the land, was no less than 377,577 *l.*

224. *Chairman.*] By what authority did they pretend to do that?—By the authority of the Act of Parliament. I apprehend that the Acts which were drawn, and which were rather numerous, shewed very little prevision; the whole system originated in what was then called, and has since gone by the name of, Mr. Labouchere's Letter; and Acts were passed in succession, with a view to give immediate employment to the people in improving the land; those Acts contained powers of deviation.

225. Mr. *Hennessy*] Will your Lordship be good enough to read a few lines of the Report setting forth the opinion of the Treasury Commissioners as to the dissatisfaction of the landowners?—The Commissioners state, "having now gone fully into the subject of the first and second heads of our instructions, we cannot conclude our letter without stating our opinion that there are ample grounds for the dissatisfaction which has been expressed by the landowners; but at the same time we feel it would be too severe upon the Board of Works to make those officers bear the responsibility which they have been allowed by the Act to take upon themselves." The Act was not sufficiently stringent, and they abused the powers of deviation. It was the same with regard to the Shannon Commissioners; they, I think, abused their powers of deviation; but that would not have brought us necessarily into such antagonism with the Board as has lasted up to the present moment, if we had not found (as landed proprietors), in reference to the Act that I have just read, that the Board of Works in Ireland struggled as hardly and as strongly as they could to impose upon us all that they could by possibility charge, and in no one instance that I have ever heard has the Board interfered with the Treasury in favour of the landlord. If the Treasury were disposed to deal leniently, they conceive it a point of their duty to extract as much money from the landlords of Ireland as they can, and that conviction having been strongly impressed upon the landlord has led undoubtedly to the state of feeling I have referred to.

226. *Chairman.*] Have you any doubt that the dissatisfaction amongst the gentlemen of Ireland was perfectly well founded?—I am very sure it was as the Committee expressed it, "extremely well grounded," for the very reason that in no one case that I can recollect or call to mind, have they in any way taken the side of the country gentlemen, even partially, in any dispute that may have arisen with the Treasury, but on all occasions it was rather the reverse, the Treasury has had to interpose to mitigate the action which the Board of Works desired.

227. Mr. *Hennessy.*] It has been stated by Mr. Gladstone and other members of the Government that operations of this class should be regarded more as private commercial works than public undertakings; do you concur with the contrary opinion expressed by the Commissioners Sir Richard Griffiths, Sir William Cubitt, and Mr. Rendle, in their report to the Treasury in these words: "Great operations of this class should be looked on more in the light of public than of private commercial works?"—I do, undoubtedly; I said in one of my answers about the Shannon, that it was generally felt that in the improvements of the river a considerable portion of the expenditure should be borne by the public, because the results sought go far beyond the mere fact of benefit to individuals.

228. Mr. *Longfield.*] Do you think there is sufficient inducement held out to a tenant for life, as regards pasture drainage, by the system of advancing loans?—No; I think a tenant for life, ought to have the interest somewhat lowered, and the time of repayment extended.

229. Are you aware that formerly the system under the Montgomery Act in Scotland was to enable a tenant for life to improve his estate, and to charge a certain portion of the amount against the successor?—I have heard so.

230. Do you not think that that system affords a greater inducement to a tenant for life to improve his estate than merely the system of annuities, by which, if he lives long enough, he has no charge against the successor at all?—I have never considered that there was a power to do so in Ireland.

231. For instance, under the present system a young tenant for life has no charge against his successor at all, has he?—No; no doubt it would be an advantage so far to give him that power within limits.

232. Because he has had all the trouble of superintendence, &c.?—Yes.

233. Are you aware that formerly the system under which glebe-houses in Ireland were built enabled each incumbent to charge his successor?—I am, a certain proportion.

234. And also that a tenant for life who planted timber trees could get a certain portion allowed as against the heirs in tail?—Yes, I so understand it.

235. Would not that system, if it could be adopted, tend more to the improvement of an estate than that by which a tenant for life has no claim whatever as against his successor?—I think it would.

236. Would it be of some advantage, then, in your Lordship's opinion, as tending towards that, if for a certain number of years, say for five or seven years, a tenant for life who borrowed money was exempt from the repayment, and then that the instalments should commence at a lower rate?—Yes; undoubtedly it would be an improvement, because the advantage is not felt until then.

237. The money is not, in truth, expended?—No.

238. The 5,000 *l.* borrowed would be part of an entire system of improvement upon an estate, and the tenant for life would have to commence paying his instalments immediately, although he could derive no benefit whatever for six or eight years, or until the entire system was completed, is not that so?—Yes; I think that is so.

239. Therefore, if you could see some mode of the

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the annuity being what is called a deferred annuity, as far as the Government was concerned, even if it should be on rather higher terms, say 7 per cent., would not that tend more to induce tenants for life to improve than the present system, by which immediate liability is entailed, although the benefit does not commence for some years?—I think it certainly would; it was with some notion of that kind that I alluded to the giving a discretionary power, if it was possible to find a safe body in whom to vest it, as to the terms upon which these loans should be given to applicants: different conditions call for different terms.

240. With regard to tenants also the system of annuities, leaving out the benefits they confer, is not popular, is it?—No.

241. Although, in point of arithmetic, the 22 years may embrace the principal and interest, in point of a man's feeling it does not at all; is not that so?—As to the point of a man's feeling, he feels that he pays 6½ per cent. for his money.

242. Have not public loans, when judiciously employed in Ireland, been extensively productive of revenue to the State?—Very much so; the strongest case I remember ever to have heard of, was many years ago, when Nimmo made roads into Connemara, which roads I think were made entirely at the expense of the State, certainly in the greatest measure; and I remember to have heard that the revenue collected in that country, where previously there was no revenue at all, repaid the Government for the outlay in a very few years.

243. As to the north of Ireland, is it not in this state, that you may call it a new country, the resources of which would be enormously developed by a judicious public expenditure, which would always be remunerative to the State?—I hope and believe so.

244. Take, for instance, the improvement of harbours and piers, and the development of the fisheries, the milling power, and so on?—Yes.

245. Is it not in the state almost of a new country in which a State expenditure would be productive both of public and private benefit?—I believe so, and I believe that it has been so to an immense extent, as far as it has gone.

246. You state that great facility has been given by the Commissioners in the way of loans for the improvement of private property?—Yes.

247. At little expense?—Upon fair terms.

248. Do you happen to know that the precisely contrary system is adopted where the loans are for public purposes; is it not almost impossible to get it?—It is so.

249. For piers, for instance?—Yes.

250. Mr. *Hennessy.*] Has your Lordship received any communication from a member of the Irish Government, with reference to whether any of these questions before the Committee should be treated as Imperial questions?—I received a letter from Sir Robert Peel, which I took the liberty, having previously obtained his permission, to publish in the newspapers. His speech at the Dublin Society struck me as so remarkable that I thought it right to make certain there was no mistake, and also that there would be no want of courtesy or any indiscretion in adverting to that speech when an opportunity should occur in public, I wrote him a letter, private in its terms but not in any other sense, and his answer was of the same nature; and in consequence of a controversy that I got into afterwards, I thought it just and right to publish the letter, to which publication he expressly stated he had no objection.

251. Can you give the Committee copies of the letters that passed between you?—Certainly.

Jovis, 30° *die Martii*, 1865.

MEMBERS PRESENT:

Lord John Browne.	Mr. Hennessy.
The O'Conor Don.	Sir Frederick Heygate.
Colonel Dunne.	Mr. Howes.
Mr. Finlay.	Mr. Lowe.
Sir Edward Grogan.	Sir Stafford Northcote.
Mr. Hankey.	Sir Robert Peel.

COLONEL DUNNE, IN THE CHAIR.

HENRY HICKMAN BARNES, Esq., called in; and Examined.

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252. Mr. *Hankey.*] You are the Solicitor to the Exchequer Loan Commission, commonly called the Public Works Loan Commission, in London?—Yes, I am.

253. Have you been connected with that Board for a number of years?—Seven or eight-and-twenty years.

254. Is that as long as the Board has existed?—No; the Board was established in 1817.

255. Will you explain to the Committee under what Act of Parliament this Board has been constituted; I do not want to know in detail?—The Board was originally constituted under an Act of 57 George the Third, 1817, and it has been continued by subsequent Acts down to the present time, the last Act being the 26th and 27th of the Queen, which passed in 1863.

256. That Board is now managed by a Board of Commissioners, who are appointed by the Crown, I believe?—Appointed by Parliament originally; subsequently, Commissioners have been appointed by other Acts, and the other Commissioners have been elected by the Board themselves.

257. An unpaid commission?—An unpaid commission.

258. Have you, under the powers of the Act, lent money to Ireland?—Yes.

259. Under what Acts of Parliament were you empowered to lend money to Ireland?—Several of the Acts, but more especially the 5th of Victoria, Session 2, c. 9, s. 13 of which extended all the powers of the English Commissioners to Ireland.

260. Was that the first time that the powers of the Commissioners were extended to Ireland?—No; they had power to lend to Ireland before that Act, but all the purposes for which we could lend in England, were by that section extended to Ireland.

261. Previously to that Act to which you have just now referred, was any money lent by the Commissioners to Ireland?—Oh, yes.

262. Will you be kind enough to state to the Committee, what has been the general operation of the Acts as regards Ireland, stating when you first commenced lending money to Ireland, and what have been the general actions of the Board, with regard to Ireland, subsequently?—The loans to Ireland, previous to the Act of 5 Vict., were very few. We had powers to lend to Ireland by several special clauses in the previous Acts, for particular purposes, but they were seldom exercised; the Public Works Commissioners in Ireland, lending money for those purposes. The principal loan to Ireland before that, was a special loan to the Ulster Canal of 120,000 *l.* under an Act of Parliament passed for that particular purpose. There were other small loans made to Ireland, but not to any extent, before the Act I have mentioned.

263. Previous to the Act of Victoria no considerable sum of money was lent to Ireland, or perhaps none, except that to the Ulster Canal?—Some small sums, but very few; I do not think more than six loans altogether.

264. What were the nature of those loans?—There was a small sum lent for Courtown Harbour, and a sum lent for building the Bishop of Down and Connor's palace.

265. Sir *Stafford Northcote.*] Were those by special Act?—No, under the general Act.

266. Sir *Edward Grogan.*] There was a special clause in the general Act authorising those particular loans, was there not?—Not for Courtown or the bishop's palace; for the Ulster Canal there was a special Act.

267. Mr. *Hankey.*] The other sums were trifling in amount, you say?—Yes; I should think altogether not 30,000 *l.*

268. Subsequently to the passing of this Act of Victoria, what further sums have been lent to Ireland; can you put in a list of all the sums that have been lent to Ireland?—They are numerous; but I could have done so if notice had been given of what was required. I can state them generally.

269. Give us the total amount?—Exclusive of the Poor Law?

270. We will refer to that presently?—The last return made to Parliament was up to 31st March 1864. I will mention the Poor Law loans separately.

271. Sir *Edward Grogan.*] Can you give me the Parliamentary number of the last return?—It is an annual return; I have no means of doing that now.—(*Vide* Finance Accounts printed by Order of the House of Commons, 8th June 1864, No 370, p. 62.)

272. Mr. *Hankey.*] There is an annual return made to Parliament of all sums lent by the Public

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Works Loan Commissioners, under their various Acts?—Yes.

273. Sir *Edward Grogan.*] This is for the year 1864?—Yes; 31st March 1864.

274. Mr. *Hankey.*] Give us the actual amount by the last return made before Parliament?—£. 2,726,000, exclusive of the Poor Law.

275. Sir *Robert Peel.*] Between the 5th Vict. and the present Act?—No; that is from the commencement to the present time.

276. Mr. *Hankey.*] That is exclusive of the Ulster Canal?—Yes.

277. Sir *Edward Grogan.*] Does it include the famine loans?—The famine loans did not pass through our Board.

278. Mr. *Hankey.*] What have been the general objects of those loans?—Canals and harbours, law courts, bishop's palace, markets, roads, railways, burial boards, and waterworks.

279. Could you give us, subsequently, a statement showing what total amount had been lent, and the details of those to which you refer?—Oh, certainly.

280. Sir *Edward Grogan.*] Those are all given in the annual return?—Under those names which I have mentioned.

281. And the amounts under each head separately?—Yes, canals and harbours, and so on.

282. Mr. *Hankey.*] But not the amount for each separate canal?—No.

283. I think you said, with the exception of the Ulster Canal, and about 30,000 *l.*, all had been lent subsequently to that Act of 5th Victoria?—Yes.

284. What was the amount of the loan to the Ulster Canal?—£. 120,000 by the Public Works Loan Commissioners, and 10,000 *l.* by the Public Works Commissioners in Ireland, 130,000 *l.* altogether.

285. Sir *Edward Grogan.*] That is included in the 2,700,000 *l.*?—Yes, the 120,000 *l.*

286. Mr. *Hankey.*] Excepting that 130,000 *l.*, all has been lent subsequently to that early Act of Victoria?—With the addition of the 30,000 *l.* that I mentioned.

287. Will you state to the Committee what has been the general mode of application for these loans, have they originally been made to the Public Works Loan Commission, or have they been made in the first instance, through the Treasury?—Direct to the Commissioners.

288. In all cases?—In all cases, with the exception of the Midland Great Western Railway; that application was made to the late Sir Robert Peel or Sir Charles Wood, the then Chancellor of the Exchequer.

289. Sir *Edward Grogan.*] That is the extension to Galway you are referring to?—Yes.

290. Mr. *Hankey.*] What has generally been the nature of the applications, the mode of application?—Generally a letter addressed to the Secretary of the Commissioners, enclosing an Act of Parliament under which the parties are authorised to borrow; upon that the Commissioners direct the case to be investigated, which is done by means of interrogatories that are drawn applicable to each case specially; those are sent to the parties to be answered, and (as it used to be) verified by affidavit, now by statutory declaration.

291. And do the Commissioners consider themselves bound to make any communication to the Treasury?—Oh, no; no communication is made to the Treasury in ordinary cases; sometimes a communication has been made, under special circumstances.

292. But the Commissioners have power to act quite independently of the Government, if they see fit?—Yes, and do so act.

293. Under those several Acts?—Under those several Acts.

294. What precautions do the Commissioners generally take previous to granting a loan?—Upon the return of the interrogatories answered, with the documents called for, they are laid before the Board with a report, stating the substance generally, and in what manner it is authenticated; upon that, if it be a work of a large nature, or that requires the opinion of an engineer, instructions are given to some engineer to survey and report to the Board.

295. Do the Commissioners take upon themselves the responsibility of ascertaining whether the security offered is adequate, in their opinion, to secure the return of the money?—Among other things they first look to see whether the work for which the loan is applied for is actually required, and whether, in their opinion, it is a useful and profitable work; they then look to ascertain if sufficient funds be forthcoming, by means of the loan, or with the loan, and money to be raised by the parties, if all is not to be borrowed to complete the work according to the estimate; and then they look to see what the returns are likely to be, so that the security shall be adequate.

296. Do the Commissioners require any other parties to make any contribution, or will they undertake to supply the whole amount required for any particular work?—We do not supply the whole amount if it is a joint stock company, or where there is any private interest; we have supplied sums where there was no private interest; for example, as to burial boards, we lend the whole amount; in the case of railways the parties have, of course, to comply with the Act of Parliament before they can borrow, to pay half the capital; we see that that is done before we lend our money.

297. Do you take general precautions to see that there is ample security, according to the judgment of the Commissioners, for the repayment of the money?—Not for repayment only; but that funds are forthcoming for the completion of the work; and then we estimate, when it shall have been completed, whether it will produce a revenue adequate to the sum required to be borrowed.

298. There must be many cases in which the amount of revenue is hypothetical?—Of course. Now, in the case of a railway not constructed, we cannot tell what the revenue might be, except by traffic returns, and by general estimation.

299. When you have lent money for making roads, how is it?—It has very seldom been for the making of a new road; it has been for improving roads, and making bridges across roads, where we could estimate the return.

300. But in one way or other you satisfy yourselves that there will be security for the repayment of the money?—We make every possible inquiry with that view.

301. Will you state what has been the result of those loans of 2,700,000 *l.*; how much of that has been repaid?—About a moiety.

302. Sir *Edward Grogan.*] Up to the same date, of course?—Yes.

303. That would be about 1,300,000 *l.* repaid, would

would it not?—I will tell you directly; 1,200,000 *l.* of principal has been repaid.

304. Mr. *Hankey.*] Is the remainder due, or is it still in course of regular repayment?—The remainder is outstanding. When you say due, you mean actually demandable; it is due, and outstanding, but not demandable, because the time has not arrived when the instalments are to be repaid.

305. But is there any part of that, in reference to which the time has arrived for repayment, which has not been paid?—A very small amount (with the exception of the Ulster Canal), and perhaps that would not be more than six months in arrear.

306. The Ulster Canal?—No, with the exception of that; that will be considered a loss. That was a compulsory loan, by Act of Parliament; the Commissioners had no discretion as to that.

307. Have you experienced any difficulty in recovering the amounts as they become due?—Not beyond sometimes having recourse to proceedings; but there is no difficulty, because the moment we take proceedings under the powers of the Act we get the money. We had occasion once to take possession of a railway in the north of Ireland, and that brought the money.

308. Sir *Robert Peel.*] What railway was that?—The Coleraine Railway.

309. Mr. *Hankey.*] Have the actions been frequent in which you have been obliged to have recourse to legal proceedings to get the money?—They have not.

310. I understand generally that when you have taken these proceedings you have succeeded, under the powers of the Act, in recovering the money?—With very little pressure we recover the money.

311. What has been the state of the advances under the Poor Law?—We advanced under the Poor Law Act, 1 & 2 Vict. c. 56, 1,422,680 *l.*

312. *Chairman.*] That was the whole?—Yes, the whole.

313. Mr. *Hankey.*] At what periods were the loans advanced; did they extend over a lengthened period, or were they all about one time?—They were all within four or five years from the passing of that Act

314. Were those loans compulsory, or was it left to the discretion of the Commissioners?—They were not compulsory, but the Commissioners exercised very little discretion in that, under an arrangement made between the Government and the Poor Law Commissioners.

315. Lord *John Browne.*] Was that sum advanced for building poor-houses?—Yes; the arrangement then was that the Poor Law Commissioners were to make orders authorising the borrowing and to certify that the borrowing was made with their consent and approbation, and when those orders came down the Commissioners advanced those loans.

316. Mr. *Hankey.*] They exercised no discretion as to expediency?—No.

317. Or as to the security?—No.

318. What has been the result of those advances?—The result has been 52,145 *l.* repaid, and 1,370,534 *l.* entirely remitted.

319. When you say remitted, was it remitted by the Government, or had the Commissioners power to remit?—It was remitted by the Treasury. We had Treasury Warrants for it, but I am not quite sure whether there was an Act of Parliament or not.

320. Will you give the date of the Treasury Warrant?—21st February 1845, as to 47,268 *l.*, and 17th July 1850, as to 1,323,266 *l.* 16 *s.*

321. The Commissioners have no longer, then, anything to do with that matter?—No; it is written off their books, and so returned to Parliament.

322. *Chairman.*] How was the money raised by the Loan Commissioners; did they borrow it, or get it from the Treasury?—From the Treasury. All the money down to the Act of 3 Vict. c. 10, was raised by Exchequer Bills; from that time to the present it has been a charge upon the Consolidated Fund, and comes by quarterly issues from that fund to the National Debt Commissioners, who are trustees for the public.

323. Then it is, in fact, raised by the Government, to be lent again, so far as Exchequer Bills go?—Yes, so far as Exchequer Bills go.

324. Will you state the Act?—Fifth Victoria, Session 2, chapter 9, the one I before referred to; that was the first money advance.

325. Could you say the amount that was got by Exchequer Bills, and the amount raised by the Consolidated Fund?—The amount raised by Exchequer Bills was 7,656,000 *l.*

326. Applicable to what purpose?—For the purposes of Ireland alone, no; I cannot distinguish between the one and the other now.

327. Since that, how much was got from the Consolidated Fund?—About eight millions.

328. Can you state at what interest those loans were made to Ireland, or whether the interest was the same in all cases, or different?—All the loans were made at 5 per cent., but all the loans to railways have been reduced by Treasury Warrant to 4 per cent., with one or two exceptions, small amounts.

329. Can you give a return stating the amount of each loan, and the date of it?—The accountant to the Commissioners could do that much better, he could show the advances and the rate of interest.

330. Is there any general period for the payment of loans?—The loans are made repayable by annual instalments of one-twentieth.

331. Sir *Edward Grogan.*] And 5 per cent. interest?—Five per cent. interest, except in those cases where it has been reduced by Treasury Warrants to 4; the Dublin Waterworks, for instance there the interest has been reduced to 4 per cent.

332. You could give a statement of that?—Yes.

333. Sir *Stafford Northcote.*] Upon what principle is so high an interest as 5 per cent. charged?—To prevent the public coming to us more than necessary.

334. *Chairman.*] I believe after the loan is made you took no more pains about it?—Oh, yes, we generally take security for the due application of the money and for the production of evidence as to its having been applied for the purposes for which it is lent; and also we take security for the finishing of the work within a certain time; we take that security by the deeds under which the money is secured, and in the case of railways take the certificate of the Government inspector.

335. In the Galway case you got the certificate of the Government inspector?—For the completion

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completion and opening of the line we had the certificate produced and sworn to by the engineer of the line.

336. If that was not done had you a remedy?—Yes, against the parties for the due application.

337. What was the security?—In several cases it has been by bond to the Crown by the directors, and those who will have the expenditure of the money; it is by personal bond or personal covenant, and not as directors.

338. Would that apply to all public undertakings, cemeteries for example?—No; cemeteries would be so small; there being a charge on the rates the parties themselves would look to it. I am talking of railways and canals, and any large works.

339. After the Act of Parliament was passed would the Commissioners have any discretion, finding the security bad, to refuse the advance of the loan. Supposing the Act of Parliament gave the power of making a loan to a certain company, and the Commissioners found that the security was not a proper one, have they the discretion to stop the loan?—We have no compulsory loans to companies; we have the general power to lend under our Public Acts.

340. And therefore the Commissioners are always responsible for the security of the loan?—Certainly; and in many ordinary companies in which they attempt to put in a clause in Private Acts for the purposes of a loan, we invariably strike it out.

341. Sir *Edward Grogan.*] Do you make the loan in one lump or by periodical instalments?—Instalments; for example, the Belfast Harbour; we agreed to lend them 100,000 *l.*; that was to be divided into four instalments of 25,000 *l.* each; the second and subsequent being contingent on the due application of the last preceding; so in railways.

342. Sir *Stafford Northcote.*] Does the Board exercise any discretion as to the character of the works upon which it shall advance the money; I mean, does it take their utility into consideration, or look only to the security?—They look to the character of the work, whether it be requisite and probably useful; that is the first consideration before entertaining the application.

343. They would not advance money then, upon ever so good a security, if the work was one that did not appear to them to be of public utility?—Certainly not.

344. Mr. *Hankey.*] There is no special Act, is there?—There is no special Act under which we are to lend money for any undertaking, except special funds are granted by Parliament for the express purpose.

345. Sir *Stafford Northcote.*] What are the principles upon which the Board proceed; or have they any principles upon which they proceed and decide what are to be considered works of public utility, previous to any loan being made?—There are no definite rules laid down; each case depends upon itself and its merits, as developed by the information given.

346. What sort of information do the Board require as to the probable utility; do they require local information, or do they get information from agents of their own?—They get information by interrogatories, which they issue to the applicants, applicable to each case. If it be a railway, they get the extent of population of the various places, the stations, and all the details relative to such a scheme; the traffic returns, and the statement of the probable income, as well as the ground upon which such a statement is based.

347. Does it frequently happen that they decline proposals, which are made to them upon the ground that the works are not of sufficient public utility?—Not in Ireland; there have not been many cases of that sort.

348. What amount of funds have the Commissioners to dispose of in the year?—£. 300,000 under the Public Works Act, and 350,000 *l.* for harbours.

349. Mr. *Hankey.*] Annually?—Annually. That is the charge for five years from the passing of the Act, and which has been renewed from 1852 by subsequent Acts continuing it.

350. Sir *Stafford Northcote.*] How do they get the money from the Treasury; what is the course pursued?—The money is transferred from the Treasury to the Commissioners for the National Debt, and the Public Works Loan Commissioners draw upon the National Debt Commissioners.

351. And those two sums are transferred annually, are they?—Those two sums are transferred, by quarterly issues, annually.

352. Then, what becomes of the repayments?—The repayments are made to the cashiers of the Bank of England, and fall by such payment into the Consolidated Fund.

353. So that, without reference to the amount of the repayments, you receive the 650,000 *l.* a year?—Yes.

354. Are the advances periodically made by the Treasury, whether the money is wanted or not?—Certainly not; we do not write for the money until the necessity arises.

355. *Chairman.*] Then you only draw the amount that you actually want?—We take the entire quarter.

356. Sir *Stafford Northcote.*] Have you any principle as to the division between England and Ireland: do you allocate a particular portion to Ireland?—No; in addition to the 300,000 *l.* which is issued quarterly, there is a sum of 60,000 *l.* charged by the same Act upon the Consolidated Fund, which goes direct to the Commissioners of Public Works in Ireland for them to lend.

357. Sir *Edward Grogan.*] That does not pass through your hands?—It goes direct from the National Debt Commissioners to the Commissioners of Public Works in Ireland; that is, they draw upon them the same as we do.

358. Mr. *Hankey.*] That the Commissioners in London have nothing to do with?—Nothing; but it is under the same Act.

359. Sir *Stafford Northcote.*] Do you suppose, if you had a larger amount placed at your disposal, that the applications are sufficient in Ireland to enable you to apply a larger sum?—I think we have adequate funds for all applications that would be entertained.

360. The rate of interest is sufficiently high, you think, to prevent any very large influx of applications?—That may be one of the causes to prevent any increase; but I think that most of the large undertakings requiring assistance do come: I do not know of any case in which an undertaking has been stopped for want of funds, by way of loan; that is, for want of funds lodged with

with us. You were instancing the Galway case; we have funds for Galway, if Galway were good.

361. Sir *Frederick Heygate.*] You had spoken of an advance to the Coleraine Railway, in the north of Ireland?—Yes.

362. Is that paid off now?—Entirely.

363. Without any loss to the Government?—Without any loss whatever.

364. And with interest?—With interest and expenses.

365. In the remission of these loans to the Unions of Ireland, are you aware that the greater part of the Unions in Ulster have already paid off those loans?—No, they certainly have not; they have paid a part, I think, but only an instalment or two—a very small part.

366. Perhaps you can give the Committee those that have not paid off entirely?—I cannot do that; I can tell you that out of 1,400,000 *l.* only 52,000 *l.* has come back.

367. But you cannot state what part of the country has paid off?—I cannot at this moment.

368. Mr. *Hankey.*] Could you do so by reference?—Yes; I could. (*See* Appendix.)

369. In making advances for public works there is always power taken to foreclose, is there not, on the part of the Commissioners?—That is given by Act of Parliament.

370. How long a period is it usual to give a public company after the completion of the work before that power of foreclosure is used?—The power of foreclosure arises the moment that they make default in payment; there is no time limited.

371. How soon is the first payment made, as a general rule?—As a general rule, the payment for a railway on account of principal is at the end of the third year from the date of the advance of the money, the interest being paid annually.

372. And how is it with regard to other public works?—As regards harbours, it would be about the same amount, and the other loans would be an instalment of principal with the interest annually; the 20th part annually; the reason being that the one has to raise the money by its income, and in the other where it is raised by rate, there is no reason why they should not pay.

373. Is it within your knowledge that there has been any instance of a public work being sold within twelvemonths of the completion of the work?—No; I do not recollect a single instance of a public work in Ireland being sold.

374. I was alluding to Great Britain generally?—Certainly not within anything like so limited a period in Great Britain; the instances have been very few, and those certainly not within anything like so limited a period.

375. The *O'Conor Don.*] You say that 2,700,000 *l.* was advanced for railways to Ireland?—That is for all purposes.

376. Do you include in that the advance made to the Midland Railway for the Galway Extension?—Yes.

377. Similar advances have been made in Great Britain, have they not?—Not for railways.

378. Mr. *Hankey.*] I do not think you have any powers, have you?—Oh, yes, we have, with the exception of the Liverpool and Manchester, which was a very old line made some years ago, and the Sheffield Junction, which was under peculiar circumstances, we have declined railways in England.

379. The *O'Conor Don.*] Can you give the Committee the amount of the advance made in England for public works of a similar description during the same period as this 2,700,000 *l.* in Ireland?—In Great Britain it has been about 13,000,000 *l.*

380. Sir *Edward Grogan.*] In the same time?—In the same time.

381. Sir *Robert Peel.*] From 1817, I think?—Yes.

382. The *O'Conor Don.*] How much of that 13 millions can you say has been repaid?—Nearly eight millions.

383. Sir *Robert Peel.*] Has been repaid, or is due?—Have been repaid.

384. The *O'Conor Don.*] Eight millions of principal?—Eight millions of principal.

385. Was there any of the balance remitted?—No part has been remitted.

386. Then the balance is still due?—The balance is still outstanding.

387. Sir *Robert Peel.*] And in the course of regular repayment?—In part; in some cases it will not be recovered, but to a very small amount.

388. Why have you not instituted proceedings in those cases?—Generally, there has been some reason, by reason of invalidity; there have been some one or two roads which have been destroyed by railroads, and there was no means of enforcing the payment.

389. Lord *John Browne.*] But did not the Railway Company in a case of that sort, pay the money that was due on the road that was destroyed?—No.

390. The *O'Conor Don.*] Can you give the Committee the amount that you would consider a bad debt, or a loss in Great Britain?—A return was made to Parliament in 1853, which gives that; there have been scarcely any bad debts made since 1853.

391. Sir *Robert Peel.*] There were a good many before that?—For example, the Thames Tunnel was one that was a compulsory loan; we had no discretion.

392. *Chairman.*] What is the date of the return you speak of?—The return was made in the early part of 1853, just after the change of Government.

393. The *O'Conor Don.*] You are not able to give the Committee the amount now?—I have not the paper before me; it has been presented to Parliament, I believe.

394. Have you had any difficulty in recovering any portion of this money that has been already paid in Great Britain; you stated with regard to Ireland there had been no difficulty; has that been equally the case in Great Britain?—Generally; with occasional pressure where there has been a default.

395. Sir *Robert Peel.*] There is all you have had to do in Ireland?—Just so.

396. Therefore, the conditions are the same?—Yes.

397. A slight application of pressure has resulted in immediate payment?—In ultimate payment, not always in immediate payment; we have never had to go before the Courts in any case, although proceedings are sometimes threatened.

398. Lord *John Browne.*] Upon the whole, in both countries you have had the money pretty regularly repaid?—Certainly.

399. And no loss has been sustained by the Treasury?—

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Treasury?—Except that which was returned to Parliament.

400. Sir *Edward Grogan.*] The return of 1853 shows all the money lent in any part of Great Britain?—Certainly.

401. Lord *John Browne.*] You are aware that during the famine there were large sums advanced for relief works in Ireland?—I know it generally.

402. You have mentioned that 1,422,000 *l.* has been advanced for building poorhouses in Ireland?—Yes.

403. At the close of the famine, was not the money advanced for relief works and money for building poorhouses consolidated together into what are called annuities?—I am not aware of the fact; the advances made by the Public Works Commissioners were ordered to be remitted; that is all I know upon the subject.

404. Are you not aware that they were remitted when the Consolidated Annuities upon the land in Ireland was remitted by Mr. Gladstone in 1853, when the Income-tax was substituted for it?—No.

405. And the spirit duties augmented at the same time, and as part of the same arrangement?—I do not know that.

406. Sir *Robert Peel.*] When was the Coleraine Railway stopped?—It was never stopped.

407. Was the working never stopped?—No; the day we took possession of the Coleraine Railway we granted a working lease to McCormick.

408. What year was that in?—I should think about 1857 or 1858.

409. When you applied pressure upon the railway, did you do it upon the shareholders?—No.

410. When you put pressure upon it, did you put it upon the directors, or generally upon the shareholders of the Company?—Neither; we gave notice to the Company, through their secretary, that, in default of payment within a limited time, the railway would be seized, and it was seized.

411. Then, the working of the trains must have ceased?—Simultaneously with the seizure, we, in order that the railway might not stop, arranged to meet McCormick on the spot, and gave him possession that same hour under the lease, so that the trains were never stopped for an hour.

412. What would have been your course of proceeding if you had not received from McCormick or any one else an assurance that the money would be paid, would you have not gone upon the shareholders?—No; we had no claim, no security, no charge against the shareholders.

413. But you had against the Company, surely?—The Act of Parliament says we are to take security upon the undertaking, and upon the income of the undertaking.

414. Well, the undertaking is by the Company?—It is represented by the Company, but there is no personal liability; if the undertaking itself is not considered security enough, the loan is not made, and when we get a railway of sufficient length, valuing what the materials would produce, if destroyed, we can then form a pretty accurate estimate of the minimum it would fetch if it were put up for sale.

415. What was the amount of your claim upon the Coleraine Railway?—£. 70,000.

416. Have you heard that a railway in Ireland has since been made bankrupt or stopped with similar arrears?—I know there is one in arrear; I presume you refer to the Swilly.

417. No, that is another one; I meant the Bagnalstown?—We have no loan on the Bagnalstown; the Swilly is in a little difficulty just now.

418. What was the amount of the advance to the Swilly?—£. 13,000.

419. Do you anticipate losing any portion of that?—We shall not lose a farthing of it; we should have put the pressure on before, but there was some dispute as to the rolling stock, and that has been before the courts in Ireland.

420. I want to ask you about the advance to the Ulster Canal Company; you advanced that money because it was considered a great national work, I suppose?—Because the Parliament thought it so.

421. Similar to other works executed in other parts of Great Britain?—Yes.

422. It was considered a great national work, was it?—Yes.

423. From the beginning, was that made as a free advance or in the nature of a loan?—A loan. We were authorised and required to advance by way of loan 120,000 *l.* to the Ulster Canal.

424. Which was afterwards advanced to 130,000 *l.*?—Yes, by reason of some of the banks having slipped or the locks giving way, and an additional sum of 10,000 *l.* was required and spent through the Public Works Commissioners in Dublin.

425. That being in the nature of a public work, not having succeeded, no repayment has been made on account of those advances?—There was a small payment made, but very small; therefore it may be considered as all lost, all unpaid.

426. Was it in the hands of the Government?—It is in the hands of the Public Works Commissioners of Dublin; they have possession for the purpose of superintending the works; it was let for a time to Mr. Dargan, and, at the expiration of his lease, the lessees were called upon to do certain repairs, by the direction of the Treasury, through the Public Works Commissioners of Dublin; they being on the spot, those repairs have, I believe, been executed, and it is in the hands of the Public Works Commissioners with our consent.

427. Have you any interest in the advances that have been made?—We have only been in possession about four months.

428. Do you expect that you will?—No, I do not expect anything, unless there is a very large expenditure to make the canal navigable.

429. Therefore, in the first instance, the Ulster Canal was guaranteed by the Government, because it was understood to be a public work?—Yes; and it was supposed that it would materially assist the inland navigation of Ireland as connecting one loch with another.

430. And when it was found that it had not answered, the Government of the day frankly gave up the repayments that ought to have been made?—I am not aware of that; I do not think there has been any given up.

431. I thought you said it was off your books now?—It is under the management of the Public Works Commissioners in Dublin; but there has been no remission.

432. Then you can still call upon the Company to repay you?—If they had any existence; all the

the rights of the Company are vested in the Commissioners.

433. You say that advances have been made for the erection of poorhouses in Ireland to the extent of how much?—To the extent of 1,400,000*l.*

434. A considerable portion of that was remitted in consideration of the famine distress in Ireland?—Whether it was in consequence of the famine distress, or otherwise, I do not know.

435. But it was remitted?—Yes, it was; to the extent I named.

436. You have no claim whatever upon counties or districts in Ireland for that money now?—No; and never had, only upon the unions and the poor rates.

437. They are building poorhouses in Scotland in several districts at this moment, are they not?—We have had no applications for loans for them.

438. None at all?—Not for poorhouses.

439. Not for workhouses?—No.

440. Are you quite sure of that?—We have had no application for loans.

441. They are building many workhouses which did not exist before?—Yes.

442. How are they built then; are they paid for out of the local rates?—It would seem so, or by local borrowings.

443. But not through your Board?—Not through our Board.

444. Lord *John Browne.*] Are the sheriffs' courts of Scotland making advances for that purpose?—We have had applications from a sheriff's court in Scotland, but the proceedings were irregular, and went by.

445. Sir *Robert Peel.*] You have made no advances for poorhouses, as you have done for Ireland?—Certainly not.

446. You said your Board was quite independent, and that when a vacancy occurred, you filled it up amongst yourselves?—A majority of the Commissioners have, by Act of Parliament, a power of appointment, and they have exercised it in one or two instances, always getting their appointments confirmed by their next Act of Parliament.

447. In the first instance, they were appointed by the Government of the day?—They were appointed by Act of Parliament, and subsequently, where vacancies have occurred, and it has been material to get in any particular person as being useful to the Commission, the Commissioners have appointed by warrant.

448. Without any reference to the Treasury?—In some cases, without any reference to the Treasury, and confirmed by the next Act.

449. Then, being an independent Board as you say, all applications came direct to the Board?—Yes.

450. Not all, surely?—All but those I have mentioned.

451. Did not the application from the Dublin Waterworks Company come through the Treasury to you?—No, it came direct from the Dublin Waterworks Company to the Board; I believe Sir John Gray had been to the Treasury upon the subject before.

452. Surely the remission of the interest came from the Treasury?—That was subsequent to the advance.

453. You are desired by the Treasury, at the request of the Government, to diminish the rate of interest upon the money advanced?—Certainly, the rate of interest could only be reduced by the Treasury: they had nothing whatever to do with the application.

454. You are obliged to adhere to the 5 per cent.?—Yes, there was a power, with the consent of the Treasury, to advance at a lower rate; we never act upon that; we advance at 5 per cent., leaving the parties to go to the Treasury, and get it reduced if they can; and that was the case with the Dublin Waterworks Company.

455. And upon the direction of the Treasury, you did so without any discretion on your part?—Yes, we have no discretion; the Act of Parliament gives us none. The Treasury have the power, and they exercise it when they think fit.

456. The *O'Conor Don.*] Was the advance to the Ulster Canal Company at 5 per cent?—Yes.

457. Lord *John Browne.*] Did you advance to the Caledonian Canal Company also?—No, there was no advance to the Caledonian Canal Company I think; but really the loans have been so numerous that it is impossible for me to recollect them all.

458. I thought it was exactly the same case?—No, it was not.

459. *Chairman.*] Is there any difference between the interest upon loans advanced in Ireland and in England, or is there the same interest upon each?—The loans to Ireland are reduced in a greater proportion than those to England.

460. Mr. *Howes.*] You have mentioned that the rate of interest has been reduced in some instances by the Treasury?—By direction of the Treasury.

461. Has the term of repayment ever been enlarged?—Yes.

462. In the same manner by the Treasury?—Yes.

463. You have no discretion in the matter?—No, not beyond 20 years without their consent; and when parties apply for an extension, we reply, The power is in the Treasury only.

464. Have there been numerous complaints or remonstrances about the terms of these loans made to your office?—I never heard a complaint.

465. It is a system of advances or loans, properly so called, under which you act?—Certainly.

466. Therefore, you do not advance money except upon works which produce a direct revenue, or at any rate, some indirect revenue closely connected with it, such as rating?—Yes, we advanced for railways; that is, for the tolls.

467. That is a direct revenue?—It will be when worked completely.

468. It is always upon some work upon which there must be a revenue, either direct or indirect, as in the case of rating?—Yes, there is no revenue from Burial Boards.

469. Rating is a source of indirect revenue, is it not?—Certainly.

470. The same principle applies to advances for railroads or turnpike roads in Ireland?—Not in Ireland; I do not recollect that we have a turnpike road, or the security of a road there; it would be a county assessment.

471. Then it would be rating?—Yes.

472. Sir *Edward Grogan.*] In the 1,422,600*l.* advanced to the Poor Law loans, was that for the purpose of building poor houses loan, or did it include money advanced for former years?—For poor house loan.

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473. Under what head does the money that was advanced for the relief of the famine in Ireland come?—I know nothing whatever about that; we have nothing to do with that, it did not come through us, and we were not communicated with on the subject.

474. How did you remit money by order of the Board of Works in Ireland, so advanced?—We have nothing whatever to do with it in any shape or way.

475. With reference to the loans for the Poor Law purposes, the erection of poor houses in Ireland, were those made under authority of an Act of Parliament or by order of the Treasury?—They were made under the authority of the Act of Parliament.

476. And to whom were they made?—To the guardians of the unions.

477. Were the monies ever paid to the guardians of the unions?—Direct.

478. I understood from you that it was paid to the Poor Law Commissioners, and by them advanced?—No money has been advanced to the Poor Law Commissioners in any case; it has been issued on their certificate of the fitness of the buildings and the extent to be advanced for them, but the money was always advanced by the Commissioners to the guardians direct.

479. You said that a sum of 2,726,000 *l.* had been advanced, and that 1,200,000 *l.* had been repaid?—Yes.

480. One million five hundred thousand pounds is in the course of repayment?—Yes.

481. Have you any reason to apprehend that any default will take place in respect of those instalments as they arise?—In part of them, but a very small part; that part is shown by the paper to which I have referred as a Return to Parliament in 1853. I expect that the money advanced to the Ulster Canal Company will not be repaid, and we have one or two very small exceptions besides that. With those exceptions I expect the whole will be repaid.

482. You will judge from the manner in which the instalments have hitherto been repaid, that they will continue to be so in future?—Exactly so; there has been very little irregularity.

483. With regard to the instalments that have been hitherto repaid, they have been repaid in the ordinary course of business, with an occasional pressure now and then, I suppose?—Just so.

484. And a precisely analogous state of things exists in this country?—Yes.

485. You have not found greater difficulty in recovering your payments in Ireland than has existed in this country?—Perhaps I may say that the payments have been more regularly made in Ireland.

486. Then, in the event of its being considered politic on the part of the Government or Parliament to make fresh loans to Ireland, you would have no apprehension of the ultimate repayment?—I cannot tell that; that would depend upon the nature of the loans.

487. With regard to the Ulster Canal, you put that down as so much money lost; 130,000 *l.*, I understand, that your Board were required, as it were, to advance for the construction of the canal?—Certainly.

488. It was not discretionary with you?—No, it was not; it was under an Act of Parliament passed specially for the purpose.

489. The Parliament of the day considered that it would be a useful work, in opening up the inland navigation of the country?—That was stated to be the ground of making the loan.

490. Did it, in point of fact, carry out the object of Parliament; did it open up the navigation of the country?—Yes.

491. I caught an expression of yours a few moments ago, as to something being requisite to make the navigation; what was the meaning of that expression, that it would not repay unless it was made navigable, was that it?—No; some short time ago the surplus water of the River Blackwater was taken by millowners, and the dam was stopped, which they were supposed to have the right to do; and, further than that, a reservoir was made too small, consequently in dry seasons there was no water, and the excess of the water in rainy seasons sometimes was too much for the bridges.

492. The reservoir you spoke of was part of the works connected with the Ulster Canal?—It was.

493. And made under the order of the Government engineers and by their authority?—It was made under the supervision of the Canal Company and by their authority.

494. Were not the plans and sections previously submitted and approved of?—They were submitted to Mr. Telford, and approved by him.

495. He was the person employed by the Government of the day to inspect and report, was he not?—Yes.

496. He was their consulting head engineer of the work, in fact?—No, not the head engineer of the work; he had nothing to do with the work; he was only to report upon the plans.

497. But he approved of them on the part of the Government?—He did; they were submitted to the Treasury, and upon that the Bill was introduced for the loan.

498. If, therefore, the object for which that money was advanced to make the canal navigable was made under the direction and authority of the Government, and that did not fulfil the object, was it very unreasonable that the money should be lost?—If any money be spent that does not carry out the object, we always expect it will be lost.

499. But could it carry out the object when it failed for the reason you have mentioned?—It could not carry out the object if it failed.

500. For the reason you have mentioned?—If it failed from any reason.

501. I think you said the reservoir made by order of and approved by the Government, was insufficient and inadequate?—So it was stated years afterwards.

502. If it was insufficient and inadequate, would that account for the failure of the navigation?—Not alone.

503. Would it, in part?—Certainly; if the reservoir was not there there could be no supply from it.

504. You said something about some millowners having the right to divert water from the canal?—No, not from the canal; from the River Blackwater, which prevented the feeding of the canal.

505. That right existed, I suppose, previous to the formation of the canal?—I should think so, because they could not have established it afterwards.

506. At the period of the commencement of the canal, and the expenditure of this money, those

those rights were known, or ought to have been known, to the Government engineer, who approved the plans, ought they not?—Very likely; but I do not think I ought to give an opinion upon that.

507. You are alluding to a loss of 130,000 *l.*, because they never paid any part of the money to you; I am trying to account for the loss?—They did pay a small part of the money that arose from tolls, soon after the works were constructed, and after that some of the locks and sills got into a dilapidated state before the Commissioners took possession; after that, disputes arose between the millowners and the canal company, by which the water was diverted from the reservoir, and kept to the Blackwater and the mills, consequently the reservoir did not supply the canal; there was not sufficient water to pass the boats through the locks to the extent that the navigation required, and therefore the trade fell off.

508. And therefore there was no repayment of the loan to you?—And therefore there was no repayment of the loan until the Commissioners took possession and granted a lease to Mr. Dargan at 400 *l.* a year, with an increasing rent, in the event of the tonnage carried on the canal exceeding a certain amount.

509. Did the rent ever increase?—The rent never did increase, the rent was paid by Mr. Dargan; whether it was paid out of his own pocket or out of the tolls I cannot tell.

510. Then, in point of fact, this Ulster Canal, which was made with a view of opening the inland water communication of the country, for the reasons you have mentioned, failed of its effect?—It did.

511. Was it constructed chiefly under the inspection of Government officers?—Oh, no.

512. Did not you say, that Mr. Telford approved the plans?—He approved the plans, but he had nothing to do with the works.

513. The works when they were made were approved and sanctioned by the Government, as I understand you?—By Mr. Telford, certainly.

514. And those works failed to accomplish the object in view?—They failed so far; I do not know that they can be said to be an entire failure to this day, because you can get a boat from end to end now.

515. Have you yourself any knowledge of the canal, and the country where it is situated?—I know the canal from end to end, but as to having a knowledge of the country I have not any, such as to base an opinion on.

516. Would it be of any use if it could be a navigable and useful work at present?—Looking at the railroad which is running at the side of it, I do not see the use that it could be in Ireland; Sir Richard Griffiths disapproved its being closed up, because it kept open the inland navigation.

517. Sir Richard Griffiths was of opinion that it was not desirable to close it?—The last opinion that I saw of his, which was some time ago, was that it should be kept open; some years ago, when a Bill was before Parliament for the construction of a railroad to supply the country, Sir Richard Griffiths was consulted as to whether they should sell this canal to the Railway Company, and he reported against the closing of the canal for the conversion into a railway, and therefore it was not sold.

518. Sir Richard Griffiths is a gentleman of position in Ireland and knows the country well, and his opinion is entitled to great weight by the Government, I suppose?—I should think so.

519. And, in his opinion, it was undesirable to close the canal?—I can only say that it was so, but it is four or five years ago since I saw that opinion.

520. Did his opinion go so far as to make it desirable that it should be an efficient navigation?—I do not think that was part of his report, but I know the impression was that it was expedient to keep the canal in repair, and is so even at the present time.

521. To make it, as far as possible, a navigable communication?—Yes; and I believe the same question is now under discussion as to acquiring the additional water rights with that view.

522. You stated that there was an annual advance made by the Treasury to your Board of Works of 350,000 *l.* a year for the erection of piers and harbours throughout the kingdom generally?—Yes.

523. Are there many applications to you for the purpose of aid towards the erection of small harbours in Ireland?—Not many; but we have had applications, and have advanced money for making a small harbour at Bangor, near Belfast.

524. Sir *Robert Peel.*] Has there been any application from Wicklow?—Not yet; Bangor is a small one, Belfast is a large one, Carlingford is a large one; that is under consideration at this moment; there has been an application from Galway, but not granted.

525. You have rejected that, I think?—We have declined it.

526. Sir *Edward Grogan.*] Has there been an application from Wexford also?—Not at present; inquiry has been made, but there has been no application.

527. Will you describe the process of an application made to you for a loan towards the erection of small piers and harbours?—The parties, under Act of Parliament, are required to go before the Board of Trade and get their sanction to the borrowing; when they have got their sanction, they send their application to the Commissioners accompanied by such sanction, with all the papers and plans which they laid before the Board of Trade, and upon which that sanction was founded; if those papers satisfy us upon the points which the Commissioners require to be satisfied upon, they take it into their consideration and grant or reject the application; if they are not satisfied, they issue interrogatories as in all other cases, and send their own engineer to inspect and report, and upon the consideration of the answers, and upon the engineers' report, the Commissioners then decide.

528. And that is, you take every precaution to see that it shall be a public work of a remunerative or valuable description?—That is one of the first considerations with the Commissioners, the utility of the work, and the requirements of the locality for such work. They then consider what the nature of the works to be erected is, and whether the estimate is sufficient to complete them. If the estimate is sufficient to complete them according to the report of their engineer——

529. Of your own engineer?—Of our own engineer, and the statement laid before the Board, then the Commissioners look at the security and the time of completing the work; the repayment of the money is secured,

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and the entire completion of the work is secured within a limited time.

530. And when you have approved of the loan, does your Board in any manner interfere to see that the money is expended according to the plan and estimate?—We bind them to execute the works according to the plans. We do not issue the second instalment, if it be a large loan, until they produce evidence of the expenditure of the first instalment for such purposes, and then when the entire work is completed, before we cancel the bond for completion, we have a survey.

531. But your own officers—your own engineer, for instance—does not interfere in the construction of the work, or in the expenditure of the money, further than to see that it is done in accordance with the original plans and sections?—No; I should mention that we have no staff of engineers. It is an engineer specially employed for the purpose. We have no officer of that kind; we have a very limited number of officers.

532. You stated that your rules were, that the instalments of the principal, that is, 5 *l.* per cent., were payable within three years after the completion of the work?—You are not now talking of harbours?

533. No; the general law that you make?—In general we require them to be repaid in 20 years, but sometimes where the works take a long time in constructing, the first repayment on account of principal is made at the expiration of the second or third year, according to the length of time which the works take.

534. That is, you do not require the instalments repaying the principal to commence until the work, a railway for instance, shall be at work and making its money?—Exactly so; that is the general principle.

535. You say you make the interest payable in the first half year, I think?—In the first year; that is required by Act of Parliament.

536. But not the interest in general, that can be repaid out of the money of the loan itself?—Either from that or from shareholders' subscriptions.

537. But in case there be no shareholders, you speak of some works upon which you have advanced money for public purposes without there being shareholders?—Yes.

538. How is that repaid?—That is repaid from income.

539. From rates?—Yes, because in those cases the rates are payable whether the work be completed or not; the rates accrue from the passing of the Act, not from the completion of the work.

540. Have any advances been made by your Board to any authorities in Scotland, public or private, for the construction of fishing piers?—Yes, at Kirkwall, and there are several applications pending.

541. For the construction of small piers and the accommodation of fishing boats?—Yes, Kirkwall is one and Dunbar another, for fishing boats.

542. Can you supply the Committee with a list of the applications that have been made and approved of for that purpose, and sums granted?—Yes, for the fisheries; but they are very few.

543. You were asked a question about that large work in Scotland, the Caledonian Canal; was there any advance to your Board by the authorities connected with it?—No; there was no advance to the Caledonian Canal.

544. I also understood you to say that no advance was made by your Board for the erection of poor houses in Scotland?—No; the Caledonian Canal might be some years ago; but one of the Commissioners, who is present, says there was no loan. I do not remember any. I do not believe there was any advance at all by our Board.

545. *Chairman.*] Am I quite right in understanding that the Commissioners had only 60,000 *l.* a year to give to the Board of Works?—£. 60,000, part of the 360,000 *l.* which was charged upon the Consolidated Fund; 60,000 *l.* goes over to the Public Works Commissioners, and that we have nothing to do with afterwards.

546. But you send 60,000 *l.*?—No; the Act of Parliament directs it to be so paid.

547. The remainder of the 360,000 *l.* comes from the Treasury direct?—To the National Debt Commissioners for the Public Works Loan Commissioners.

548. Without your intervention?—It was charged by the Act of Parliament on the Consolidated Fund, and it is to come to us by quarterly issues; when we want it we write to the Treasury to request that they will direct such moneys to be transferred to the National Debt Commissioners.

549. For the Board of Works?—No, for our Board.

550. I am afraid I do not quite make myself understood; I wish to know how much goes to Ireland through your intervention?—According to the applications.

551. Does money go in any other way but through your Board?—£. 60,000 goes direct from the Treasury to the Public Works Commissioners in Ireland; the money that goes from our Board to Ireland depends entirely upon the applications for grants.

552. But 60,000 *l.* went clearly without that?—Yes.

553. Sir *Edward Grogan.*] £. 300,000 is annually advanced to you by the Treasury for public works?—Yes.

554. And 350,000 *l.* for harbours and piers?—Yes.

555. And the 60,000 *l.* to which the Chairman refers is extra?—Yes.

556. That is a sum that does not go through your hands at all?—It does not.

557. Sir *Stafford Northcote.*] Do these inquiries that are made and the other preliminary steps involve much expense to the parties?—The engineer puts the parties to expense; the preparation of the interrogatories and other inquiries that are made, and the correspondence puts the parties to no expense.

558. The engineer and the investigation of title cause expense, I suppose?—No, that is after the loan is granted; the securities and the investigation of the title may cause some, but that is very rare; except in railways, the engineer, in all cases where we send one, has to be paid for by the parties, and they are made aware of that, because they are required to give an undertaking to pay it.

559. Have you heard that complaints are made that the expense is greater than it should be?—I have never heard a complaint. I should think the complaints would be very rare; for example, if

if a loan is for 100,000 *l.*, as it was the other day, the expense of the engineer might be 150 *l.*

560. What steps are taken in preparing the deeds, the mortgages, and so forth; who is that done by?—That is done by me.

561. Is that done at the expense of the Commissioners or parties?—That is done at the expense of the borrower; when the security is completed it is laid before the Board with the account of the expenses, so that the Commissioners have the control of it.

562. Sir *Robert Peel.*] That is not included in the 150 *l.* that you mentioned?—That was the expense of the engineer.

563. *Chairman.*] What has been the expense of the Exchequer Loan Office; was it anything considerable?—Very small.

564. How are those expenses met?—By vote of Parliament. I think the whole expense, taking the average, is 3,400 *l.* a year; I do not think they have exceeded that for some years.

565. What officers have you in connection with your Board?—There is the secretary, and assistant secretary, an accountant, a clerk, a messenger, a door-keeper, and a housekeeper.

566. You have no salary yourself, have you?—Yes; I have 350 *l.* a year for attending the Board and advising the secretary; all the rest is paid by fees.

567. Upon the mortgages?—Upon the business done; anything that is done out of the Board is by bill, upon the Commissioners, and has to be approved in the usual way, but I think the Commissioners' accounts have not exceeded 20 *l.* in five years.

568. The amount of fees is regulated by the Commissioners?—No; the amount of fees is regulated by the general law; the ordinary charges of solicitors are allowed by the Commissioners to be charged to the parties, the account is laid before them, with the security, so we have no direct communication with the borrower in respect of the charges.

569. In Irish loans, are you satisfied with the approval of the security by the Board of Works, or do you examine yourself?—We examine ourselves; we have nothing at all to do with the Irish Board of Works as to loans.

570. Mr. *Finlay.*] You say that you do not think the preliminary expenses too large; does that apply to small loans?—In small loans there are no preliminary expenses, generally speaking.

571. What is the smallest sum that is advanced by the Commissioners in Ireland?—I should think the lowest has been 3,000 *l.*

572. Can you say how much the preliminary expenses would come to upon an advance of that amount?—In the case of the 3,000 *l.* I do not think there were any preliminary expenses. We took the statement of the Board of Trade, and the evidence of the applicants' engineer. It was a private loan for Bangor Harbour, that is the one I allude to, and there were no preliminary expenses, to the best of my recollection, there.

573. In some cases where it is necessary to employ engineers or other officers, is it not possible that the preliminary expenses may come very heavy in small loans?—I do not know what may be called very heavy.

574. You have no idea of the per-centage?—It is not a per-centage. I can give you an instance of Belfast, that was an advance of 100,000 *l.*, and I think the expenses there were under 200 *l.*

575. Sir *Robert Peel.*] Not the whole expense?—The expenses of the engineer, the preliminary expenses.

576. Mr. *Finlay.*] I am asking as to the preliminary expenses generally?—The whole expense, although the loan was to be advanced by four instalments, including the 200 *l.* to the engineer, would not come to 350 *l.*

577. Will you look at that return (*handing it to the Witness*). Is that the return to which you alluded in an answer that you gave to my question as to the return of the advances by repayment?—That is the one that was made in 1853.

578. Will you explain the principles upon which that return was made?—I do not quite understand your question; this is a statement of facts.

579. It gives first, as I understand it, the amount of money advanced, in the first column?—Yes.

580. Then it gives the interest upon that at three per cent.?—So I understand.

581. You have stated that the interest was at five per cent.?—This is a statement made of moneys advanced, and which we debit ourselves with, and credit the Treasury with interest at the rate of five per cent. on the amount so advanced, in the same way that the repayments are debited to the Treasury, and interest charged upon those repayments at three per cent., for the purpose of making up the profit and loss.

582. And it appears, going upon that principle, taking the aggregate amount of loans during the period, that there was an actual gain to the Treasury on account of those loans, does it not?—Certainly; and after deducting all compulsory loans, there was a gain to the Treasury, the compulsory loans being those under which the greatest loss arises.

583. Can you state now what was the actual loss upon the compulsory loans in Great Britain during that period?—Yes, it is shown here: the total surplus at the time this return was made appears to be 1,446,000 *l.*, but I cannot speak to this myself.

584. *Chairman.*] Could you get the accountant to send it in in detail?—Certainly; the accountant would be able to continue this account to the present time. It will take some time to do, because all the balances will have to be taken out. I have no doubt, in looking at this for a short time, I should be able to answer the question; but this being put into my hands at the moment, and it being rather a complicated return, I do not feel myself in a condition to do it.

585. Sir *Frederick Heygate.*] What became of the two per cent., the difference in the amount charged by the Treasury and the amount paid to the Treasury?—All the money repaid, whether for principal or interest, goes direct to the cashiers of the Bank of England, and by such payments, under the operation of law, falls into the Consolidated Fund. We receive no money, we pay no money; that is, as Commissioners, all that we do in the way of issue is to certify for it to the National Debt Commissioners. All the money paid is paid directly to the cashiers of the Bank of England on account of the fund, and by such payment falls into the Consolidated Fund, and which is carried over every other day, I believe.

586. Then there is a profit to the Government upon these advances?—It is assumed that there will

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will be a profit, because whether the Government issues the money at two, three, or five per cent., the difference between that and what the borrowers pay would be a profit; the return gives the whole expense of the commission from the beginning.

587. The *O'Conor Don.*] Just look at that return again; does it not appear from that, that in all the advances made to Ireland the Treasury have had a gain, with the exception of the Ulster Canal?—This would not show the gain.

588. Calculating it at three per cent.?—Calculating the advances made by the Government at three per cent., I must then calculate the rate of interest which the various loans have paid.

589. Does it not appear from this return that there is a surplus, on the calculation of interest at three per cent., upon every loan made in Ireland, with the exception of the Ulster Canal?—Yes.

590. Is there a surplus upon the Irish railways?—Yes, there would be a profit upon the Irish railways.

591. Then, in point of fact, there is a profit upon every loan, with the exception of the Ulster Canal?—That is the only instance to the contrary, that I recollect.

592. As to the Poor Law loans, they were remitted under the name of Consolidated Annuities?—Yes, they were remitted.

593. Lord *John Browne.*] How is it that it is not the same as regards England; why is it that there is not a profit in the same way on the loans at Battersea Park and Chelsea Bridge?—Because at the time that return was made Battersea Park produced nothing.

594. And how as to Chelsea Bridge?—It was the same as to that, but since that period large portions of Battersea Park have been let off, and large payments made; you are talking of a period of 11 years ago.

595. Upon the whole, are you prepared to say whether there has been a gain or a loss upon the loans made to carry out those two objects, Battersea Park and Chelsea Bridge?—I am not prepared to say, because I have not had the accounts made up.

596. The *O'Conor Don.*] But up to the date of this account it would appear that upon the advances made to Ireland there was only a loss upon the Ulster Canal, exclusive of the loans to Poor Law Unions?—I think that was a compulsory loan; there are other losses in Ireland.

597. Sir *Edward Grogan.*] What is the date of the return you are speaking of?—It is made up to the 31st of December 1852, I think.

598. Mr. *Hennessy.*] Are you aware that there is a return before the House, in relation to Chelsea Bridge, of the year 1864, 10 years later than that one, which gives a loss?—I have seen that return; it is one of the Woods and Forests.

599. Does that show a loss?—It shows a loss for repairs and collection beyond the receipts.

600. The Caledonian Canal has been mentioned; I think you said that money was advanced by Parliament for that purpose?—No; I said nothing of the kind; I do not know that any advance was made.

601. It was not an advance, it was a vote, I believe?—I know nothing of it.

Alexander Stewart, Esq., called in; and Examined.

A. Stewart, Esq.

602. *Chairman.*] You are, I think, Solicitor to the Board of Works in Ireland?—I am.

603. You have been connected with almost all the advances made under the various Acts in Ireland, since what year?—I have been Solicitor to the Board for about 33 years, and have been attached to the Board ever since its formation.

604. You are acquainted with the mode of advancing loans, of course?—Yes.

605. Will you state to the Committee what that mode is; first with respect to arterial drainage, and under what Acts those advances are made?—The 5 & 6 Vict. c. 89, was the first Act.

606. Will you state how applications are made, and what are the requirements for granting those applications?—It was not the course to make direct application for loans under that Act.

607. Was it that Act that constituted the Board of Works?—Not at all; the constitution of the Board was long anterior to that. The 5 & 6 Vict. authorised the Commissioners of Public Works, and first made them Commissioners for drainage for all those operations that were to be carried on, and the mode of proceeding was this: parties whose lands were injuriously affected by water, presented their memorial to the Board, and prayed for the formation of a district; that application was reported upon, and the district was formed, upon the assent of a certain number of proprietors.

608. Do you recollect the number in the first Act?—It was two-thirds. The plan of operation was submitted to the proprietors at a meeting convened for the purpose, and they had an opportunity of rejecting or approving of the measure.

609. Was that a meeting convened by them, the proprietors?—No; the Board called the meeting.

610. An application was first made to the Board, as I understand you?—Yes; and then, having taken the subject into consideration, they submitted plans, and called a meeting of the proprietors, who either assented or dissented, as they thought proper.

611. But was the initiative in the proprietors, or in the Board?—In the proprietors.

612. How did they first communicate with the Board?—By memorial.

613. Then the plans were submitted to this meeting, which was convened by the Board of Works?—Yes.

614. At whose expense were they made?—At the expense of the proprietors, the applicants.

615. In the memorial did they propose to bear the expenses?—Yes.

616. If the plan was adopted by two-thirds of the proprietors, what then happened?—The memorialists undertook to pay the preliminary expenses if the project turned out to be futile, or was abandoned, or not undertaken; and if the drainage was undertaken, those preliminary expenses formed part of the costs of the undertaking.

617. Then, if it was adopted by the assembled proprietors at this meeting, did the Board of Works proceed with the work?—No; they subsequently required the assent in writing of the proprietors to the extent I have mentioned.

618. Then,

618. Then, when those assents were obtained, was there another meeting?—No.

619. Was there a specification and sum mentioned in the first communication of the Board of Works to the proprietors?—An estimate.

620. And a certain estimated sum for the completion of the estimate?—An estimate only; no certain sum. It was like every other general estimate; it was an estimate approximating as near as the circumstances would admit of.

621. Were not the assents given upon the faith of the estimate?—No; I should think not. I should think they give the assents upon the terms of the Act of Parliament.

622. But did the proprietors give their assent so wildly that that estimate was not the basis of the calculation of the advantages which they were to derive to themselves?—All they could do was to deal with the estimate as they found it; there was no understanding that that amount would be expended, or that it would be exceeded. I mean to say, that there was no contract between the Board and the proprietors, if that is the object of your question.

623. The object of my question is plainly this; the proprietors based their assent upon the estimate, and the promise of the Board to undertake and complete so much work upon that estimate; was not that so?—Possibly it might be so; but then the assent was given under the terms of the Act of Parliament, with which they were supposed to be acquainted, as well as the Board.

624. What terms of the Act of Parliament are there which would justify an estimate not being a correct one?—There is nothing in the Act of Parliament that would justify that.

625. Was it not the same as the estimate of all other contractors?—No.

626. What was the difference between that and any other contract?—Contractors generally have an interest in an undertaking; the Board of Works have none, beyond executing the work to the best of their judgment and ability, and with the greatest advantage to the proprietors.

627. But the proprietors give no assent, except to the sums stated in the estimate in the first instance?—No, they do not assent to the sum at all. It runs in this form: Whereas an Act of Parliament was passed so and so, and whereas, I am a proprietor within the district of so and so, I hereby consent to the execution of the work under the Act of Parliament by the Commissioners of Public Works.

628. Is there no reference to the estimate in it?—No.

629. But the assent is given upon the faith of that estimate, is it not?—I cannot tell what induces the proprietors to give assent.

630. If the estimate had been absurd, do you suppose the proprietor would ever have given his assent, if it was double what the work ought to be completed for, for instance?—I cannot tell what a proprietor would do; I can only judge what I would do myself.

631. Well, what would you do?—I would inform myself to the best of my ability upon the subject.

632. Do not the proprietors in general do that?—I think they do.

633. But was it not upon the faith of the Board of Works forming a reasonable estimate originally that the assent was obtained?—The estimate was formed by the engineer, and submitted to the proprietors, together with the terms of the Act of Parliament under which they were proceeding, and the proprietors, having the whole matter before them, gave their assent, or dissented.

634. But is it possible that any sane man would give an assent to an estimate that he did not suppose was formed by persons capable of making it?—I really should not like to form an opinion on what other persons would do.

635. Have you any report or estimate that you can lay before the Committee?—No.

636. Are they not obtainable?—Yes; the Committee can have reports in many districts.

637. Will you lay one or two of them before the Committee?—With much pleasure; and if there are any particular reports they would like to have, they can have them by mentioning them.

638. Sir *Edward Grogan.*] The report is a small printed pamphlet, containing the report of the engineer and his estimate for the completion of the works, is it not?—Yes.

639. And that is sent to every party who shall have signed the first assent?—Before that.

640. Sir *Stafford Northcote.*] Are the Board of Works in any way responsible for that estimate?—I think not.

641. *Chairman.*] Upon what ground are they exempted from the ordinary liability to give a correct estimate?—They give the most correct estimate they can.

642. But are they not responsible for the correctness of the estimate?—Certainly not. There is no contract between the Board of Works and the proprietors.

643. Sir *Edward Grogan.*] Just to clear up this point, let me ask you this. The Board of Works are a scientific body under the Government to whose hands the execution of these works is entrusted?—Yes.

644. They get the different districts surveyed, and a report and estimate made of the cost to drain these particular districts?—Yes.

645. And to induce the proprietors of the district to agree to the expenditure to be incurred in the completion of these drainage works, the Board of Works circulate to every proprietor the report and estimate of an engineer employed by them?—Not to induce them.

646. They do circulate them, do they not?—Yes.

647. The engineer is an engineer of the Board of Works?—He is.

648. The Board are responsible for his report, the same as if they made it themselves?—Certainly.

649. And in sending that report under their authority to the individuals?—Not as if they made it themselves. They are responsible for the opinions that are given.

650. They are responsible for the accuracy of it?—Very well.

651. And in sending that circular with their seal and authority to each individual proprietor, can you entertain any question that that is the inducement which leads the proprietors to subscribe to the terms under which they enter into the engagement?—I think it may have been a great inducement to them to do so. I think it is one of the material points which they have to consider.

652. *Chairman.*] Then after these assents what do the Board of Works proceed to do?—They proceed to execute the works.

653. And if the works are completed for the sum

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sum named, what is then the course?—They then make an award, upon the completion of the works, charging the proprietors with the money expended in proportion to the benefits conferred upon each proprietor.

654. By whom is that award made?—By the Commissioners themselves.

655. If the proprietors are dissatisfied, is there any appeal from that award?—No, there could not be any appeal from that award, as I will explain. The money is all expended at the time, and, therefore, to be repaid, and you should bear in mind that under the original Act portions of the money are supplied by strangers who lend it out upon debentures, to be recouped in the same way as other money is under the award.

656. That is, the entire amount cannot be altered; but the proportion between individuals calculated upon the amount of benefit that each receives may be different?—There may be a difference; A may say that he is overcharged, and that B, the adjoining proprietor, is undercharged; that is a very good cause of objection, which may be considered at the award meeting.

657. But considered only by the Commissioners themselves?—By the Commissioners themselves, they have no object except to do justice between all parties.

658. Are the parties always satisfied that justice is done in that way?—Parties are very seldom satisfied when they come to pay.

659. Has there been any appeal from the Commissioners in that way?—There is no appeal.

660. Have there not been rehearings?—No; we cannot rehear, for upon the award being made it is final.

661. Therefore, there is no rehearing?—On one occasion a district did appeal to the Court of Chancery before we made the award, and got an injunction to prevent it.

662. And how was that settled by the Court of Chancery?—The injunction was granted in that particular case; it was in an early part of the proceedings.

663. What was the result of it?—It then came to be disposed of under the Act of Parliament, which I will presently advert to. The greater number of these works were carried out during the famine time. It was alleged that part of the proprietors did not receive value for the expenditure. A Committee of the House of Lords was appointed with regard to certain districts, and they made a report. Subsequently the Act of the 16 & 17 Vict. c. 130, was passed, which enabled the Treasury, under the circumstances that I have mentioned, to reduce the amount to be charged, and to charge only such as would appear to be the amount of benefit to the district.

664. But that Act was founded upon the supposition that the proprietors did not receive from the Board of Works the advantages for which they were charged?—Yes; that applied to works completed, and to works in the course of execution.

665. In several works, was not the estimate exceeded?—Oh, yes.

666. Was not the estimate exceeded long before the work was completed, and complaint made at the moment?—No, not a complaint.

667. Was there not an Act for second assents issued?—That is another branch of the business altogether. I will explain. During the famine it was found that the proceedings under the original Act of the 5 & 6 Vict. were too tedious to afford immediate relief, therefore they passed what is called the Summary Proceedings Act, the 9 Vict. c. 4, I think, and under that we were enabled to go to work without preliminary proceedings, which were necessary in the ordinary cases; but the expenditure in the district was limited to 3 *l.* an acre. That 3 *l.* an acre could not be exceeded, unless the proprietors assented to the further execution of the works.

668. But that was under the first Act, was it not?—Not at all.

669. Can you state the number of Acts successively and in chronological order?—The 5 & 6 Vict. c. 89, was the first; the 8 & 9 Vict. c. 69, was the next; the 9 Vict. c. 4, was another; and the 16 & 17 Vict. c. 130.

670. How did the 8 & 9 Vict. extend the provisions of the 5 & 6 Vict.?—They were amendments merely.

671. That was the Public Drainage Act, was it not?—Yes.

672. When complaints were made by proprietors of not receiving the drainage, was not that antecedent to the Act of 1853; for a long time there had been complaints of that kind?—No, only in a certain number of districts.

673. Have not the estimates been far exceeded?—Anterior to that, I believe so.

674. What were the reasons of these great excesses of estimate?—A bad return in the way of labour?—works resorted to for the purpose of relief at the time, without reference to remuneration.

675. Were the assents ever given upon the supposition that they were for relief works, under the 5 & 6 Vict.?—No; there was no necessity then.

676. But was there such a thing?—No.

677. Did the proprietors give their assent upon the supposition that it was for relief of the poor, or for their own benefit, or for the benefit of the district?—I suppose they gave their assent, knowing it was for the benefit of the districts.

678. Were the estimates framed upon the ordinary price of labour in Ireland?—I believe so.

679. And they were exceeded by the sole authority of the Board of Works using them as relief works?—Not the sole authority; I apprehend upon the special request in many cases of the proprietors in the district.

680. Then the proprietors gave their assent to convert them into works of relief from works of benefit?—They did not give their assent in the sense in which we have been using the word consent; but they gave their consent in this way, that pending these works, they urged them on because the country required relief.

681. But they anticipated that the works should be finished in a more expensive way, as works of relief, than the original estimate contemplated?—Any man, who knew the country, must have known that, I think.

682. Do they ever get any assent or acquiescence from any proprietor to that effect?—There is no such assent required under the Act of Parliament.

683. But the estimates were exceeded by the conversion of those works contemplated by the proprietors as beneficial works, into making them relief works?—Yes.

684. And were, in fact, a tax upon the proprietor for that purpose?—Yes.

685. Instituted

685. Instituted by the authority of the Board of Works?—But then the proprietors were relieved by the Act of 16 & 17 Vict. c. 130.

686. Is there any other work completed by the Board of Works, which has been completed within the estimate, or at the estimate?—I cannot answer that.

687. Sir *Edward Grogan.*] Who can?—I suppose the accountant, or, probably one of the Commissioners.

688. *Chairman.*] Then the first Act after that was the 8 & 9 Vict.; what alteration did that make in arterial drainage?—I think that was merely an amendment of the other, not any alteration in the principle.

689. Was not Ireland divided into certain districts under one of the Acts?—I never heard of it. It certainly was not.

690. Not into drainage districts?—No; not by any Act of Parliament.

691. Then as to the drainage under what is generally called Labouchere's Letter, will you state what the effect of that was?—Labouchere's Letter authorised the immediate undertaking of works upon presentment at sessions held for that purpose, and proprietors obtained money for the special purpose of doing work, and affording relief.

692. Was that work to be performed by themselves, or by the Board of Works?—It was relief work performed. I forget whether it was altogether by the Board of Works, or not; I think it was.

693. Previous to all this private drainage had been done by the Board of Works?—They could not be executed as the law then stood by anybody else.

694. Except the Board of Works?—No; I am speaking of the arterial drainage.

695. But with respect to drainage by private individuals, how is that?—That is another thing, a separate branch altogether, and for the sake of convenience, I will take the liberty of suggesting that it would be better to dispose of this first, and then go to the private drainage.

696. You say there was no division of Ireland into districts for drainage purposes by any Act of Parliament?—I never heard of it.

697. Have all the arterial drainages that were commenced been finished in Ireland?—Yes.

698. Has the drainage of the Shannon, for instance, been completed?—That never was an arterial drainage.

699. That was a separate drainage, was it?—It never was a drainage at all, I apprehend.

700. Will you state what is generally supposed to be the drainage of the Shannon?—The Board of Works had nothing to say to the Shannon operations. It was a special commission with which I was not connected.

701. Therefore you know nothing about it?—I know nothing about it.

702. Sir *Edward Grogan.*] Do you know the date of the Act of Parliament constituting that commission?—The 1 & 2 Vict. c. 61, was the principal Act.

703. *Chairman.*] Are the drainage of the Inny and the Westmeath drainage connected with the Shannon Commission or the Board of Works?—They were carried out by the Board of Works.

704. Are they completed?—Yes.

705. The entire plan?—I cannot tell whether the entire plans are completed or not, because the Act of 16 & 17 Vict. authorised only so much of the original project as was found to be equal to bear the sum to be charged; and many of the works were curtailed under that Act.

706. How were they curtailed?—By abandoning portions of them.

707. But by what authority?—Under that Act.

708. That act was passed specially to curtail those very works, was it not?—Not specially, generally.

709. Who selected the portion to be abandoned?—Certain Commissioners were appointed for the purpose by the Treasury.

710. But had they not, previously to that, engaged the Board of Works to complete these works; had not the assents and all the requirements of the first Act been performed by the proprietors, the estimates made, and the work proceeded with?—Yes, in some, but not in all cases.

711. And subsequently an Act was passed to enable the Board of Works to break that engagement?—No; not to break the engagement; I cannot admit that.

712. To do what then, if it was not to break the engagement; not to fulfil what they had promised, at all events?—That is not in the Act of Parliament, certainly; it was to finish those works to such an extent as would be beneficial to the proprietors, with reference to the sum to be charged them.

713. But who was to judge that; the proprietors or the Board of Works?—Neither one nor the other; special Commissioners were appointed for the purpose.

714. They decided between them?—Yes.

715. Was not the Board of Works of one opinion and the proprietors of another?—No.

716. You think not?—No.

717. Were the proprietors satisfied?—Many of them were not; but the best answer I can give you with regard to the proprietors being satisfied is, that I believe a great many proprietors in Ireland who did call out upon these occasions have been loudest of late years for the Board of Works undertakin again new drainage works under the 5 & 6 Vict., and the other Acts, and complaining that these Acts are now dead letters.

718. What I want to know is, if there were certain works of which all the requirements had been performed by the proprietors, and an estimate given by the Board of Works, and the works commenced, which works were stopped in many instances?—Some of them.

719. Stopped short of completion?—Yes.

720. What was the reason of that?—Because it was found that the project would not be remunerative to the proprietors.

721. Why not remunerative?—Because the expense would have been so great.

722. Was not an examination made by the Board of Works, in the first instance, to see that it would be remunerative?—Yes.

723. Then it was from an increased estimate by the Board of Works?—Very possibly.

724. That was the cause of it, was it?—It was one cause.

725. Was there any fault on the part of the proprietors as to the failure of the work?—No; but there was a fault in the state of the country at the time, the relief works being called for and being urged upon the Board by the proprietors.

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726. Was there any falling off of the wages in the country?—I cannot tell that.

727. Or a rise in the price of wages?—I am no judge of that at all; I really do not know.

728. But you say that the relief works interfered; how did they interfere?—There was not the same value from the relief work as there would have been if there was no famine in the land.

729. Who authorised the Commissioners to turn them into relief works?—I have already said; the original application of the proprietors, in most cases, I believe.

730. They assented to this change?—They urged the carrying on of the works.

731. But not in a more expensive way than before?—They urged them on to give relief to the poor.

732. You mean they urged the performance of the works?—Yes.

733. But did they make any alteration in the estimate, or assent to any alteration?—They did not.

734. Finding they were not finished, the Government brought in a Bill to absolve the Board of Works from the completion of their own contract; was that it?—No; no such Act of Parliament was ever brought in.

735. What was it, then?—There never was a contract, as I have endeavoured to explain, between the Board of Works and the proprietors.

736. Did not the proprietors consider it a contract? have they not in all instances insisted that it was a contract?—No, they have not. I have heard a great many say so, but I never could agree in it.

737. As solicitor to the Board of Works, will you state to the Committee what steps you took about security from the proprietors?—It was not necessary to take any security; the district was the security under the Act of Parliament, and it was only necessary to apportion the whole charge upon the proprietors, according to the benefit conferred upon each.

738. Then the levying a rate was the security in a certain district?—Not the rate, exactly, but an instalment.

739. Was it not a rate upon the proprietors, a rateable assessment?—It was an award fixing a certain sum upon each, repayable by instalments, in this way: if the expenditure was 50,000 *l.* in the district, and there were 40 or 50 proprietors, they were all scheduled, and the lands opposite each proprietor's name was given. Those lands were charged with an instalment, so and so, including principal and interest, and the award settled the number of years within which those instalments were to run; in short, the period for the repayment of the money.

740. Could they assess a larger amount than was contained in the estimate?—Certainly.

741. By what Act of Parliament could they do so?—The 5 & 6 Vict. c. 89.

742. By the first Act of Parliament?—And by all the other Acts.

743. They were allowed to assess to any amount the Commissioners pleased?—No; not to the amount they pleased.

744. Was there any limit?—They were allowed to charge upon the district the full amount of the expenditure.

745. No matter what that expenditure was?—Yes.

746. And they had a full right, notwithstanding their estimate, to exceed it by any amount, by Act of Parliament; is that the case?—There was no limit upon them binding them to the estimate.

747. And they might go to double or treble the amount of the original estimate if they so pleased?—There was no law against it.

748. There was a great complaint amongst the proprietors at such a law, was there not, at that right being exercised?—No; they never came to complain until they were called upon to pay under the award.

749. But they complained of the award?—They did, no doubt, in many cases.

750. And not only did they complain, but Parliament ratified their complaint by passing a law to relieve them from the injustice?—To a certain extent, under the recitals which you will see in the 16 & 17 Vict.

751. That was in consequence of a Committee of the House of Lords, was it not?—It was the result of that.

752. The *O'Conor Don.*] Of late years no arterial drainage has been undertaken by the Board of Works?—No; there is an Act now for the purpose of enabling proprietors themselves to undertake those works.

753. Do you think that Act, as at present constituted, is sufficient for the purpose?—I do, to a great extent.

754. Not as far as you could wish?—I have no wish upon the subject beyond what is for the public benefit.

755. Do you think it could in any way be extended beneficially for the public?—Yes; it has been suggested by the Irish Government that it should be amended in this respect: the present Act limits loans by the Board of Public Works to a moiety of the estimate. It has been suggested by the Irish Government to the Treasury that that limit should be taken off, and that is under consideration; what may be the result I will not presume to say.

756. But you would think it desirable that that limitation should be taken off?—Yes; it would greatly facilitate the execution of the works by proprietors.

757. Sir *Edward Grogan.*] What is the limitation you allude to?—Under the Act of 1863, which is the Act enabling proprietors to do their own work, they raise their moiety of the money through themselves, and they obtain a moiety through the Board of Works, with the sanction of the Treasury.

758. The *O'Conor Don.*] I think you said, in answer to the Chairman, that none of the arterial works taken up by the Board of Works were left unfinished?—Certainly, there were many that were short of the original conception of the work, but they were finished as far as it was considered prudent to go; many of them were curtailed.

759. From the works running short of completion?—Yes.

760. Lord *John Browne.*] Or from a want of a second or third assent?—Yes, from the want of a second assent in many instances.

761. Sir *Edward Grogan.*] With regard to arterial drainage is the process this, that the district of a country being filled with water, or the channels for the discharge of the water being insufficient, application is made to the Board of Works for the drainage of the district?—Yes.

762. If a certain number of the proprietors of a district

a district agreed in the application to the Commissioners, the Commissioners got the district surveyed by their own officers?—It did not require a certain number of proprietors at all to make that application; any individual might make it by saying he was the owner of such and such lands which were injuriously affected.

763. And upon receipt of that application the Commissioners got the district or land surveyed by an officer of their own?—They did.

764. They got a report and estimate upon that?—They did.

765. And they communicated that report and estimate to the proprietors or persons making the application for the drainage?—They formed the district; they ascertained not only that the original applicant was proprietor, but that many others were associated with him, and suffered equally with him, and they submitted their plans to the proprietors, at a meeting held for that purpose, and they assented or dissented as they thought proper.

766. You say they submitted their plans; those were the plans prepared by the engineer employed by the Board of Works?—Yes.

767. The plan that was submitted to the proprietors of the district conveyed to those proprietors that for such an expenditure those lands could be unwatered?—Yes.

768. Did it go farther, and state that by the execution of those works there would be so much improved value per acre added to the lands?—They showed that under the original Act, the 5 & 6 Vict., they were obliged to show in the schedule the precise original value of each denomination of land, and the probable increase of value; and upon that being submitted to the proprietors, and upon going over the works and under the terms of the Act of Parliament, they embarked in the undertaking.

769. Of course, then the increased value which the proprietor estimated he was to receive from his lands, depended upon the expenditure?—Yes.

770. Having submitted his plan and estimate made by the authority of the Board to the proprietors, the proprietors considered the expediency of entering upon the work?—Yes.

771. And if they assented to that work, that was what you call first assent?—If they assented to the works; second assents are different, and only necessary under the Summary Proceedings Act. There was but one assent under the original Act.

772. They gave assent in writing individually to the expenditure of so much money upon the district?—No; they gave their assent in these terms, "to the execution of the works necessary in the district, under the powers of the Act of Parliament."

773. What Act is that?—The 5 & 6 Vict. c. 89.

774. Take the next Act, the 8 & 9 Vict. c. 4?—That was as I mentioned; in order to give relief in the time of the famine, it enabled the Commissioners, upon an assent of the proprietors, to proceed with the works to the extent of 3 *l.* an acre.

775. In the plan and estimate of the works submitted by the Board of Works to the proprietors, in order to induce them to agree to this expenditure, was there a single syllable stated of giving relief to the people, being an element to undertaking the work?—It could not be.

776. Then it was not?—It was not.

777. The object was this: the country had superfluous water on the face of it; it was an object to get rid of that if it could be done for a certain expenditure, and a certain acreable value be given to it, if that was done?—All that, of course, was in the way of estimate as to the probable result.

778. But was that not the statement submitted to the proprietors?—It was.

779. Then the proprietors individually gave their approval or assent to the undertaking of the work?—Yes.

780. And he was bound *pro tanto* by such approval, and all the consequences of it?—Yes.

781. And he was to receive, in return, relying upon the ability of the officers of the Board of Works, such an improved value to his estate; was that not so?—Yes.

782. Three pounds per acre, I believe, was the limit to the Board of Works in entering upon this increased expenditure?—No; under the original Act, where no first assent was required, there was no limit at all; the limit was prescribed under the 9th Vict. when the 9th Vict. came into operation, and the Board of Works were authorised to undertake works for the purposes of relief, and therefore they might go to work without any of the preliminaries; but, in that case, they were limited to an expenditure of 3 *l.* per acre within the district.

783. Will you refer to the preamble of the 8 & 9 Vict., and show me where there is anything about relief in it?—There is nothing about relief in the preamble, but there is in the recital of section 45 of 9 Vict. c. 4, authorising the summary proceedings.

784. Is there a single recital or reference to do anything, except to give greater facilities for the carrying out of drainage works in Ireland?—Nothing more in the preamble.

785. Then this particular work which you call the relief Act——?—I do not call it the relief Act.

786. It was that Act that you used for the employment of the people?—Yes.

787. Under this particular Act was not the limit fixed at 3 *l.* an acre, that the Board of Works could expend under the first assents?—Yes.

788. Then they got the first assents from the proprietors of a district for the unwatering of the district, which authorised the Board to expend 3 *l.* per acre in such works?—Yes.

789. Have you seen any instance in Ireland, or how many can you recall, in which the expenditure so sanctioned under the first assents, where the works were completed under the expenditure so sanctioned?—I do not presume that any district was thoroughly completed on an expenditure of 3 *l.* an acre.

790. The proprietors of the district, anxious to unwater their country and improve it, placed their property, to the extent of 3 *l.* an acre, in the hands of the Board of Works, upon the authority of a survey and report made by them?—Yes.

791. And no instance can you recall to memory in which, after that 3 *l.* was expended, the works so undertaken to be executed, were executed; is that so?—No, I do not understand that; there were no particular works defined, I think, by the summary proceedings at all; they went on expending, to the extent of 3 *l.* per acre, as

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judiciously as they could for the benefit of the country.

792. They expended that according to the plan and estimate submitted by the Board of Works?—Yes.

793. Which plan and estimate the Board of Works, conveyed to the proprietors, would complete the work?—No, impossible; certainly not.

794. What was the plan and estimate submitted by the Board of Works intended to convey?—The plan and estimate was submitted under the 5 & 6 Vict.

795. Under this Act we are speaking of?—The plan and estimate under the 5 & 6 Vict. c. 89, did give the proprietors full information, and did presume that the estimate was complete for the purpose; but it was not so, and could not be so, that they would undertake to complete the works at 3 *l.* an acre; it was merely a protection to the proprietor that more than that 3 *l.* an acre should not be spent in the district.

796. Is there any clause in the 8 & 9 Vict. c. 4, in which it is conveyed to the proprietors, or in which they are informed that the plan and estimate submitted to them by the representatives of the Board of Works would not be completed for the sum specified by them, which was 3 *l.* an acre; is there any clause by which the proprietors could know, that on the receipt of the plan and estimate for the drainage in which they were interested, the works so proposed by the Board could not be carried out at 3 *l.* an acre.?—The assumption is, that they could not be carried out for 3 *l.* an acre.

797. Was there anything to convey that assumption to the proprietors?—Yes; the strongest possible proof under the Act of Parliament; the very limit of 3 *l.* an acre showed that the works could not be completed for that satisfactorily.

798. *Chairman.*] Do you mean to say that 3 *l.* an acre would not drain certain lands satisfactorily; I do not mean to give any opinion upon that at all, because I am not competent to judge, but I mean to say this, that the very fact of limiting the expenditure to 3 *l.* an acre, and requiring a second assent for the execution of further works, showed that they were only to do the best they could for that 3 *l.*, and therefore there was no expenditure to be incurred beyond that until the second assents were given.

799. Sir *Edward Grogan.*] Did the plan and estimate submitted by the Board of Works in the first instance to the proprietors, for draining the district, state what it would amount to?—I really do not know how that is. I should rather like to refresh my memory by reference to some of the reports upon that subject. I think that the plan and estimate, under the summary proceedings, were very indefinite indeed; it was for the purpose I have already mentioned. If you will look at the 16 & 17 Vict., I think the recitals in that will give some information upon the subject; it is evident from that Act of Parliament that if the proprietors were to be charged with the money that was expended they would be ruined, and therefore it was that the Treasury came forward and allowed the reduction to be made.

800. Does not the very statement that you have just now made clearly intimate that the proprietors who agreed to the drainage of the district, the full completion of which you say would ruin them, could never have anticipated such results, but that the expenditure was to have been limited under the law then in exercise?—The proprietors could not think any such thing, as regards the expenditure under 5 & 6 Vict.; they must have been aware, and fully satisfied, that in putting themselves in the hands of the Board of Works, under the summary proceeding, to the extent of 3 *l.* an acre, which would be spent by the Board of Works as best they could for the advantage of the proprietors of the district.

801. We will suppose the 3 *l.* an acre expended in the works still incomplete, what would be the next step?—The next step would be to submit to the proprietors the execution of further works if they thought proper, and then if they thought proper to assent, there would be no limit to the expenditure.

802. When you say "submit to the proprietors the execution of further works," do you mean to convey that there was a new supplemental plan and estimate submitted to the proprietors?—I cannot tell you at this moment whether there was or not.

803. But there was a fresh statement, upon the authority of the Board of Works, sent round to the different proprietors, that it would require so much more to complete the original plans?—That was the understanding, certainly; whether it was conveyed in the report, or otherwise, I cannot say.

804. Did it also go to the extent of showing how much the acreable value of the property would be increased by that?—No, it did not; the summary proceedings did not require anything of that sort as the original Act did.

805. Are you able to state what was the general expenditure per acre over the works?—No; that is quite out of my line.

806. If it has been said that it amounted to 8 *l.* per acre, would you think that excessive?—I really do not know anything about it.

807. You have alluded repeatedly to the Act of 16 & 17 Vict.; is that the Act that was passed after the investigation by the Committee of the House of Lords?—Yes.

808. That Act, if I understand correctly, appoints Commissioners to see what expenditure would be requisite to complete certain arterial drainage enumerated in the Act. Will you explain what it is?—This Act will give the information that we wanted a little while ago as to the number of Acts that have been passed with respect to this matter. It commences by reciting the original Acts, 5 & 6 Vict., the 8 & 9 Vict., the 9 & 10 Vict., and the 10 & 11 Vict.; and then it goes on: "Whereas various works for the drainage of lands and improvement of navigation, and water-power in connexion therewith, in Ireland, have been undertaken and carried on by the Commissioners appointed to act in execution of the said Acts, both under the ordinary provisions and the provisions for summary proceedings in the said Acts respectively contained, and whereas in many instances the estimates of the expenses of such works respectively have been exceeded, and many of the said works are still unfinished, and in certain cases the assents requisite to authorise the charge upon the lands to be improved, of the sums necessary for completing the proposed works have not been obtained; and whereas inquires have been already made, under the direction of the Commissioners of Her Majesty's Treasury, in relation to certain of the said works, now remaining unfinished, and the said

said Commissioners have directed like inquiries in relation to others of the said works; and whereas it is expedient that provision should be made for the completion of the said works, or such of them as upon the inquiries already made as aforesaid, or upon inquiries to be hereafter made in relation thereto, the said Commissioners of the Treasury may think fit, and with such modifications, if any, as to them may seem proper; and that such Commissioners should be authorised to direct, where they see fit, that the expense of such works to be charged against the proprietors of land, should be limited to such amount as between such proprietors and the public may appear to the said Commissioners to be just." Then, "The Treasury may give directions concerning the completion of the works in the Act." "The Treasury may reduce the amount to be charged against the proprietors." "The Treasury to cause reports and inquiries to be deposited with the Clerk of the Peace," &c. "Awards, when enrolled, to be conclusive."

809. That does not specify the work to be done?—It says, "As the Treasury may think proper."

810. There is a clause there as to the amount awarded by the Commissioners, that is, a work has been completed and an award has been made, but the objections were so strong as to excessive expenditure, that a power is given there to review the award and reduce it?—This Act of Parliament enabled them to finish the districts then in the course of execution, to charge them with only such sum as would be just and proper to be charged to the proprietors. On the same principle they said, "Although awards had been made in other cases and the works completed, we will extend the same benefit to those cases," and they did so; and some of those awards were reduced as well.

811. Then the estimate that was originally held out to the proprietor, by the survey and report of the inspector of the Board of Works, that a certain profit per acre would arise from those works, could never have been realised in such cases?—This shows it.

812. It could not have been realised, and it was not realised?—It was not.

813. Was the improved value, supposed to be given, or about to be given, to the landed proprietors of Ireland, by the execution of these works, really realised in any case?—Yes, the improved value certainly, but whether commensurate with the charge is another question.

814. If I correctly recollect the report and estimate that was issued by the Board of Works in some of these drainage undertakings, it was a distinct sum, so many shillings per acre for improvements made, as likely to result from the execution of the works; can you charge your memory with that?—It was stated as present value and probable increase.

815. It stated a decided increase, did it not?—A probable increase.

816. That probable increase refers, of course, to the amount of the expenditure incurred?—It has reference to that.

817. If the expenditure be so largely exceeded, that in no instance could the original estimate complete the works, of course the probable value must decrease?—Yes.

818. You have been asked with regard to the distribution of arterial-drainage districts in Ireland; have you seen a Return made at the instance of Viscount Duncan, in 1857, upon this subject?—No.

819. Will you look at that Return (*handing it to the Witness*); the first part of it, I think, consists of a list of arterial-drainage districts in which final awards had then been made?—Yes.

820. I think you will find 105 cases in which the drainage works had been completed; 160,572 acres appear by that Return to have been drained and improved?—I see the date of this Return is 1857; since then all the works of which we have been speaking, as undertaken by the Board of Works, have been completed and awards have been made.

821. *Chairman.*] And some finally abandoned?—All the works, where awards could be made, have been made.

822. You do not proceed with any other arterial drainage now?—No; the Treasury abandoned all future operations, and would not allow us to undertake any more.

823. Sir *Edward Grogan.*] You have alluded to the Act of 1863, which was passed with regard to drainage; what works have been executed under that Act?—None at all.

824. Is the essential distinction between that Act, and your Board of Works Act, that in the one instance there is a responsible Government Board to insure the completion of the works, and to give confidence to the public who embark in it, and in the other there is nothing of the kind?—In the one case the works were carried out by the Board of Works; in the present case they are to be carried out by the proprietors themselves.

825. By individuals?—By individuals; the plan of operation being approved of by the Board of Works.

826. *Chairman.*] Do you approve of that latter system; do you think it an improvement on the other?—Certainly; it was the Board that brought in the Bill.

827. You suggested it yourself, I believe?—I did.

828. Sir *Edward Grogan.*] You say that many complaints were made by proprietors, that none of these works were carried out by the Board of Works?—Many complained that they had not the advantage of the Board undertaking the operations of these works under the original Act.

829. Have any such complaints been made since the Act of 1863?—No, I do not know that they have; when I speak of complaints, it is merely observations that have been made to me by persons.

830. Is it within your knowledge that a large portion of Ireland has had no drainage works whatever commenced or executed in it?—I believe so.

831. Very large districts?—Some very large districts.

832. Is the greater part of Ireland, or half of it, in the same state, as to arterial drainage, in which it has remained for the last 50 years?—I think there is a great portion of it; in the north there has been very little drainage operation.

833. I presume you are of opinion that the arterial works that have been executed have materially improved the districts in which they have taken place?—No doubt.

834. Have you any reason to suppose, that if those works be extended to the north, or other districts

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districts where they have not yet been commenced, that the anticipated benefit will result?—I have not a doubt of it.

835. Would it not be right and proper, therefore, if we are to have improvements and works in Ireland, that they should be so extended through the general surface of the country?—No doubt.

836. There is one remark that you made which I wish you to explain; you seemed to convey that the proprietors of a district, by pressing the Board to proceed with their works, intended thereby to give relief, in the shape of relief, to the suffering people of the country?—Yes.

837. Did they mean anything more than that employment would be a desirable thing in the country?—Nothing more.

838. Did they ever intend to recommend that John Noakes, or Peter Styles, or any one else, should be taken on those works, or was anything further intended or understood than that it was desirable to give employment?—It was not in that way at all; but gentlemen, proprietors in the country, seeing the state of destitution, thought it a good opportunity that the destitute poor should be employed in this way, and therefore they urged the Board to go on with works as fast as they could.

839. With a view of giving employment?—Yes.

840. But was there any intimation either given or expressed on either side, that in so doing the cost of the works was to be doubled?—No, all parties were to take their chance as to that.

841. Do you know whether the Inny was one of those rivers that was completed under the Act of 16 & 17 Vict.?—I think it was; a great portion of that work, I apprehend, was abandoned; it is a very large district.

842. The proprietors never could have borne the expenditure of completing the work as it was originally designed, and have any prospect of profit?—No; it is one of those districts that the 16 & 17 Vict. applied to.

843. *Chairman.*] Now, as to the minor drainage, the thorough drainage, not the arterial, the first Acts insisted on the Board of Works performing it, did they not?—No.

844. Previous to Labouchere's Letter, did not the Act insist upon the performance of the work by the Board?—Not at all.

845. What was the first Act?—The 10th of Victoria, c. 32.

846. Will you state the operation of that Act?—That was an Act commonly called "The Land Improvement Act," which authorized the owners of land to apply for money for carrying out the particular objects defined in that Act, draining and irrigating land, clearing fences, fencing land, and several other objects have been since added to it by subsequent Acts of Parliament. And the course of proceeding is this; a proprietor applies by memorial, stating the lands in respect of which he means to make the improvement, and stating the kind of improvement that he proposes to make; he submits his own plan to the Commissioners, and they then have an inspection, and if they find that the return is equal to the rent-charge upon the money to be lent, or exceeds it, they lend the money. The proprietor has the money issued to him by instalments, and he proceeds with his works; before a second instalment is issued, we see that the first has been accounted for and properly expended.

847. By inspection?—By inspection.

848. But at no time did the Board of Works perform that themselves?—Never.

849. It was always done by the proprietor?—Always.

850. And so continues to this day?—Yes.

851. What is the interest charged in those cases?—The repayment is made in 22 years, at 6½ per cent.; that pays principal and interest.

852. Do you think there is anything unreasonable in that charge?—I do not; I think it is the greatest boon that ever came to Ireland.

853. And you think that proprietors have availed themselves considerably of it?—Largely.

854. I believe there is not the same discontent about that loan that there is about the loans for arterial drainage?—No.

855. In general the proprietors are satisfied with it?—They must be satisfied; they ask for it and get the money, and expend it themselves.

856. Have they ever given it up after taking it, without completing the object?—Yes, they have, in some cases.

857. What are the terms upon which they do that?—They only pay upon the sum so issued by instalments.

858. Are the instalments they have paid credited as part of the principal to be repaid?—Of course; they may redeem the charge at any time, according to a schedule in the Act.

859. Supposing they find that they have made a wrong estimate themselves, and do not think that the drainage will pay, they may pay the sum that has been advanced back, and reckon the instalment as part of the payment?—Certainly.

860. That is always so, is it?—Certainly.

861. Can you suggest any improvement in the mode of issuing these loans?—I cannot.

862. Either in the way of extension of time, or by lowering the rate of interest; I should like to have your opinion upon that?—I could not suggest any improvement upon the Act, as I have already said. I think it is the very best Act that ever came to the country.

863. Would you extend it to farm buildings?—It is so; farm buildings are part of the operation.

864. And labourers' cottages?—Labourers' cottages are also included.

865. But not farm cottages?—Not farm cottages; labourers' cottages.

866. Would you extend it to farmhouses?—This is not an object of the Act.

867. There has been an endeavour, in certain parts of the country, where drainage is not so much wanted to get these advances for the building of farmhouses, has there not?—It has not been considered necessary for farmhouses.

868. You would not recommend that?—Yes; I might be disposed to do so as well as for labourers' cottages.

869. What is the security that you require in these cases?—The security is the first charge upon the estate of the proprietor; the moment he comes to apply, and we agree to the loan, we make an order for a loan. In that order we schedule the lands to be charged with the 1,000 *l.* or the 5,000 *l.* that he obtains, and the Act of Parliament

ment itself gives the security; it results from that order.

870. There is no necessity for inquiring into the title?—Nothing beyond a *primâ facie* showing; that is the simple part of it; that is the great advantage the proprietors have. A gentleman comes to me and states that he is tenant for life under such a settlement, and he states the date and the parties names to that settlement, and he submits the settlement to me.

871. Will you state to the Committee the amount applicable to these loans that is left unissued?—The original grant was about 500,000 *l.*; that was increased by subsequent Acts of Parliament, and there is probably now a sum of about 150,000 *l.* or 200,000 *l.* still available.

872. Mr. *Hankey.*] Still unapplied for?—Available for parties who may think proper to apply for it.

873. *Chairman.*] Do you issue as much as is applicable to the purpose?—No.

874. Are you obliged to refuse applications from want of means?—We never have refused from want of means.

875. You always have the means?—Always.

876. It has been suggested that these advances might be made for the erection of mills, such as scutching mills?—That is another object of the Act.

877. At present?—Yes.

878. And saw mills?—No; only scutching mills.

879. But would you extend it to other mills for farming purposes alone; I do not mean for manufacturing purposes?—No, I think not.

880. Not for machinery in farm buildings?—No; machinery forms no security.

881. But if the security was given upon the estate, would you see any objection to the extension?—Machinery is perishable, and it might be that the estate would not be benefited; the tenant for life might neglect it, and the remainderman might be prejudiced.

882. You see difficulty in giving security for that purpose, do you?—I see no difficulty in giving the security, because the applicant will apply, irrespective of the lands upon which he means to erect the scutching mill; the land will be charged.

883. Are there not the same objections to scutching machinery as there are to any other kind of machinery?—No; they are obliged to put up the machinery for the scutching.

884. Could you not give them so much for saw-mills?—No; they do not allow anything for machinery at all.

885. I want your opinion as to the extension of it; it has been urged upon the Committee that there would be great advantage in it?—That is more a question for a country gentleman than for me.

886. As to the farmhouses, what is your objection to advances for that purpose?—I do not mean to object to that either; all I wish to convey is what are the present regulations with respect to them.

887. You are not of opinion, as I collect from you, that these advances should be extended to machinery?—I would not like to say whether they should be so extended or not.

888. Mr. *Lowe.*] Have not the applications fallen off very much?—No.

889. Not the applications under this Act?—No.

890. There has been a return; last year it was only 58, I believe?—There has been a great many loans made, and there are very few country gentlemen in Ireland who have not availed themselves of the Act.

891. What is the rate of interest?—It is rent-charge to the Crown of 6½ per cent.

892. How much of that is interest?—I understood at the time we framed the Act, a good many years ago, when the Treasury notary made the schedules, it was 3 *l.* 7 *s.* 3 *d.* interest.

893. It has been suggested to us, that persons advanced in life, who cannot hope themselves to realise all the advantages, are unwilling to incur these expenses, and that it will induce such persons to come forward under these circumstances to borrow money if it was spread over a larger number of years; do you think there is anything in that?—No; I think if a tenant for life thinks proper to die, his successor must pay the charge.

894. But, if he does not think proper to incur it, because he is getting old, and says, "Why should I embarrass myself for my successor?" it has been suggested that if the instalments were spread over a larger time, he would be less unwilling to do it; what is your opinion as to that?—I think the benefit resulting from this particular work being thorough drainage, and the erection of farm buildings, labourers' cottages, and all that kind of work, is an immediate benefit to the proprietor, and therefore I think there is no good reason for saying that the time should be extended.

895. Do you think it would be desirable to employ any portion of this money in lending to Irish proprietors at the rate of 3 *l.* 7 *s.* 3 *d.* per cent., so as to lower their interest upon mortgage?—I do not think it would; that is never done. We only lend for the purpose of executing works. The whole spirit of legislation is for the improvement of the land, and for the execution of works for that purpose, and not to pay off debts.

896. Or to reduce the rate of interest upon mortgages?—No; we take precedence of all mortgages.

897. What is the expense of your Commission; what does it cost the public?—Are you speaking of the whole Commission?

898. Yes?—I could not answer that question, there are so many duties. I could not give the expense of the establishment.

899. Mr. *Hankey.*] Is it paid by Parliamentary grants?—Yes, by votes; it appears in the Returns.

900. Sir *Stafford Northcote.*] Did you hear any complaints made of the expense of the preliminary inspection, or of the vexation caused by the preliminary inspection?—No, I never did, except in one instance, and that was not expense, but trouble as it was called; that was mentioned to me by Mr. Leader, but I cannot conceive a greater facility given than there is to applicants. A man will have a loan of 10,000 *l.*, or 5,000 *l.*, or 3,000 *l.*, for something like 5 *l.* or 6 *l.*; we have no stamps; I am upon salary, and am obliged to do all the legal part of it. There are some cases that require a deed, to be inspected by counsel, but that is a mere trifle in the fee, and I cannot understand anybody complaining on that account.

901. Is it your impression, from your knowledge of Ireland, that as much advantage is taken of these loans as ought to be?—I do think

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think so; we have made between 4,000 and 5,000 loans, I think.

902. Sir *Frederick Heygate.*] Do you consider, from the applications not continuing upon the same scale, that a great part of the country is therefore drained, and that such advantage is not required?—It really depends so much upon circumstances; the requirements of one year are not so great as another; people will not be so anxious in one year as they are in another, but I apprehend it will always be required in Ireland. A great many have got the extent; there is a limit to the loans; 5,000 *l.* was at one time the maximum, but by subsequent Acts it was for a time extended to 3,000 *l.* additional, and 1,000 *l.* for labourers' cottages, making 9,000 *l.* in all.

903. *Chairman.*] In your lending, you do not think the nation loses anything by it?—No.

904. Sir *Frederick Heygate.*] Are you of opinion that the amount of loan should be enforced, whatever the extent of the property may be. I think the present amount is limited to 5,000 *l.* to any proprietors?—Yes, it is for a certain period, two years; originally there was no limit, then there was a limit put.

905. Are you in favour of a limit being imposed?—Yes; I think it is but fair.

906. What is the object of a limit, so long as there is security sufficient, and there is sufficient money to be advanced under the Act?—I think it is a bad plan to have estates too heavily charged if it is not necessary, if there is no benefit for it.

907. It would not be merely in proportion to the size of the estate?—There is a good deal in that; I do not myself see any necessity for putting a limit at all.

908. Then you are not in favour of a limit, so long as the property is sufficiently large?—Yes.

909. How soon do you consider the effect of drainage makes itself apparent?—I am not a good authority upon that point.

910. The repayment under these loans, I understand, commences within a year of the advance?—It does commence on the gale days; they are in October and April, and if an instalment issues between times, the rent-charge commences on the second of such days which shall next happen after the advance; a party obtains a loan, it is issued by instalments, each instalment cannot exceed one-fifth, and he only pays upon that which he draws.

911. But the repayment would commence within six months of the issue, would it not?—No; it would be as already stated.

912. Is it not your opinion that that is a very sharp repayment?—No, I think not, for these loans.

913. Could the effect of the drainage make itself felt within a few months?—I should say probably not, practically speaking.

914. Then, in fact, the proprietor would begin to repay the loan before he reaped the slightest benefit from the expenditure, would he not?—He might suffer a little inconvenience the first half-year in that respect.

915. Do not you think it would be an improvement if the time of the repayment was a little postponed?—Probably, in many cases it might.

916. With regard to the loans for building cottages, do you not consider that the conditions are rather severe?—They have been complained against.

917. The material of the country is prohibited in many cases from being employed in building the houses, is it not?—I think not.

918. Native wood grown in the country is prohibited, is it not?—Yes, green wood is.

919. For what reason?—That I do not know.

920. Is it of your own knowledge, in England and in Scotland, that the wood of the country is specially employed in the building of cottages?—It is not within my knowledge.

921. Do you believe that the applications for loans have fallen off to any extent?—No, I think not.

922. But, according to the return of applications, the amount applied for is very much reduced, is it not?—I have not seen that return; I am only judging of the business that takes place in my own office. There appear to be applications every day almost.

923. By a Parliamentary return the reduction is enormous?—In the total amount is it?

924. In both, I think, if I recollect right; are you aware of that?—I am not aware of it.

925. The *O'Conor Don.*] If a limit was to be placed upon the amount of loans to any proprietor, would it not be better that that limit should be a proportionate one to the amount of property, the value of the estate, rather than a fixed one?—The proprietor only applies in respect to a certain portion of his estate; therefore, it is only of those portions you are to judge.

926. But, as I understand the present limit, if a proprietor applies for one portion of his estate and gets a stipulated sum, he cannot raise any upon the other portion of his estate?—No, he cannot, beyond what I have already stated.

927. Would it not be better that the amount of money given to any individual proprietor should be calculated upon the value of the estate upon which it was raised, and in a certain proportion to it?—That might do.

928. With respect to a statement you made in answer to Mr. Lowe, you said that the amount of interest chargeable upon these advances was 3 *l.* 7 *s.* 3 *d.*; will you just look at this section of the Act of 1863; do you see that the money which is here alluded to under that Act is repayable in 22 years at 6½ per cent.?—Yes.

929. And it is stated in the Act that it gives an interest to the principal at 4 per cent.?—It is not so exactly; it is 6½ per cent., but then if the charge is under 100 *l.* it would be difficult to calculate a rent-charge upon it, and therefore they say that any sum less than 100 *l.* shall be repaid with 4 per cent.

930. Will you turn to that page, and I think you will see the principal sum is also charged at 4 per cent., if you will refer to the 46th section?—No, I do not see that; the money being advanced for the execution of works which will require one, two, or three years, and there being no security until the award is made, of course they are obliged to include the interest that has accrued pending the execution of the works, and then they make it the consolidated sum. The interest is included at 4 per cent., and then the principal and 4 per cent., being consolidated, is paid off by a rent-charge of 6½ per cent.

931. In that calculation of 6½ per cent. you still believe the interest is only 3 *l.* 7 *s.* 3 *d.*?—Yes.

932. Lord *John Browne.*] Can you ascertain that positively?—There is no doubt of it; I cannot forget it, because it was the result of the actuary

actuary who made the schedule of the Act 9th and 10th of Victoria; I know it is so.

933. You get 60,000 *l.* a year paid over from the Treasury to the Board of Works in Ireland?—Yes.

934. Out of that 60,000 *l.* can you give advances for land improvement?—No, there is a special fund for land improvement.

935. And you cannot make advances out of that 60,000 *l.* for land improvement, or arterial drainage?—We can for arterial drainage under the Act of 1863.

936. But not for land improvement?—No.

937. You draw that 60,000 *l.* out of the Treasury as you require it?—Yes.

938. When it has not been drawn for five years it lapses, does it not?—I believe, by Treasury regulations, all monies voted and not applied, lapse, and the balances are re-voted.

939. Can you give the Committee the balance remaining at this moment in the Treasury undrawn?—I cannot.

940. Could your furnish that to the Committee?—I could write, and have it sent to you by the accountant; it is quite out of my line.

941. Could you ascertain the amount that has lapsed during the last 10 years?—I do not think the Act has been in operation for 10 years.

942. The Exchequer Loan Commissioners have?—The Exchequer Loan Commissioners have; but I do not think the Act applies to the 60,000 *l.* a-year, as it has been renewed only once I think, therefore I do not think the 10 years are up yet.

943. There is an immense quantity of land in Ireland that requires drainage and improvement, is there not?—A good deal, I believe.

944. Do not you believe the reason why there is a balance of 150,000 *l.* of money, granted for land improvement, untaken, is because the rate of interest is considered rather too high?—I think not.

945. Do not you think, if the time was extended, and if the interest was 5 instead of 6½ per cent., a larger amount would be taken?—Probably it would.

946. Then if such a change were made it would promote the drainage, and the improvement of the land in Ireland?—Yes.

947. And that would be beneficial to the country?—Certainly.

948. Supposing that a loan has been granted, and the amount expended and passed by the inspector, and the same proprietor afterwards applies for a new loan for the same town land for fresh works, could you give a second loan upon the same town land, or are you precluded by Act of Parliament from doing so?—We could give a second loan upon the same town land for fresh works, of course.

949. Are you sure of that?—Yes.

950. I think a case occurred within my own knowledge wherein it was stated by you that you could not give a second loan because it was not the first charge?—No; I do not think so.

951. Do you say that is not the case?—I am pretty sure I never gave such an opinion.

952. It is made a condition by the Board of Works, in granting loans for farm buildings, that the proprietors shall construct the farmhouse, is it not?—Yes, if there be not one in existence.

953. That is not in the Act of Parliament, is it?—No.

954. That is merely a condition made by the Board of Works?—It is a Treasury regulation.

955. Not a regulation of the Board of Works?—No.

956. Do you think there would be a larger amount taken for farm buildings if that regulation was not attached to loans for this purpose?—I do not really know how that would be.

957. Do not you think it is an impediment, a man being obliged to lay out money upon a farmhouse?—I think the money required to be laid out in farm-houses is so small that it cannot be considered as an impediment.

958. Is there any limit to the amount?—I think 200 *l.* is the limit.

959. If a man asks for a loan for farm buildings amounting to 300 *l.* or 400 *l.*, is he still required to lay out 200 *l.* upon a house?—I think he is.

960. If the loan is 200 *l.* for farm buildings, is he still required to lay out 200 *l.* upon a house?—I think he is.

961. Do not you think that is a great natural impediment to taking loans for such a purpose?—Probably it is, but there are very few applications from proprietors for so small farm offices as 200 *l.*

962. But is not that the reason why there are so few applications for small amounts?—That I do not know.

963. Are there not many cases where the application made for farm purposes would be required, but where a house costs 200 *l.*, is not required?—I think myself probably the limit might be taken off; that regulation might be improved.

964. Or altogether abolished?—Or altogether abolished.

Lunæ, 3° *die Aprilis*, 1865.

MEMBERS PRESENT:

Lord John Browne.	Mr. Hankey.
The O'Conor Don.	Sir Stafford Northcote.
Colonel Dunne.	Sir Robert Peel.
Mr. Finlay.	Mr. Banks Stanhope.
Sir Edward Grogan.	

COLONEL DUNNE, IN THE CHAIR.

Colonel M'KERLIE, Royal Engineers, called in; and Examined.

Colonel *M'Kerlie*, R.E.

3 April 1865.

965. *Chairman.*] You are Chairman of the Board of Works?—Yes.

966. And you are acquainted with the working of the system of arterial and other drainage in Ireland?—Yes.

967. There is no work now undertaken by the Board of Works for arterial drainages?—No, none.

968. The system of undertaking them has been given up?—Yes.

969. How are they now performed; how are arterial drainages supposed to be carried on?—They are now carried on under the provisions of the Act of 1863, which places the work under the supervision of the proprietors themselves; the funds necessary for carrying out the works being raised, one moiety by the proprietors, and the other moiety being an advance from Government.

970. Are those advances made by Government in proportion as the work proceeds?—The Act regulates that they shall be made by instalments of one-fifth of the amount of the estimated cost.

971. Is the estimate made by the Board of Works, or by the proprietors themselves?—The estimate, in the first instance, is made by an engineer employed by the proprietors themselves.

972. And submitted to the Board of Works?—Yes, with a memorial from the proprietors. The estimate is then inquired into by an inspector appointed by the Board of Works, and revised by him, as also the schedule of lands to be improved.

973. What is the security given for the loan?—A first charge upon the lands to be improved, and also the lands appropriated to the same purpose within one mile of the drainage works.

974. Belonging to any of the proprietors who sign the memorial?—Yes, or whose lands may be improved.

975. Is it compulsory upon any person whose lands are not improved?—No, but it is compulsory on those who having lands improved do not assent; it is compulsory upon those who do not assent, but who may be in a minority.

976. When a district is perfected, if certain proprietors object, and if they are in the minority, they are, notwithstanding their objection, made to pay the proportion?—A majority of two-thirds carries the other third with them.

977. And they are bound by that?—Yes.

978. The first advance is made when one-fifth of the work is completed?—When one-fifth of the estimated cost has been expended, the works are inspected, and one-fifth of the Government moiety is then advanced.

979. Sir *Robert Peel.*] Supposing the works were not well executed, what results then; have you ever had occasion to contest the proper execution of works?—No works have yet sufficiently advanced.

980. *Chairman.*] Will you state how a district is formed?—Any proprietor or proprietors in a district who are desirous of having their lands drained and improved, have an inquiry made under their own direction in the first instance, and they forward the result of that inquiry, if it is satisfactory to themselves, with a memorial to the Board of Works, requesting that a drainage district may be formed; the Board of Works then direct an inspection by an inspector appointed by themselves; having made that inspection, his report is forwarded to the proprietors of the district, who lodge it with the clerks of the unions in which the districts may be situated, for a period of two months, in order to enable proprietors to put forward such objections to it as they might think fit.

981. If a proprietor objected to being placed within the district, who would decide upon the validity of his objection?—The inspector holds a meeting for the purpose of hearing and inquiring into all objections that may have been lodged (during the period of two months) to the report; he obtains the assistance of the proprietors, and considers the whole of the subject, and then reports to the Board of Works the result. If it appears that two-thirds of the proprietors assent to the works, and that they are desirable in themselves, the Board of Works then make a provisional order constituting a district.

982. But suppose a man wishes to extricate himself from that district, considering that he does not want the improvement?—Each case will be inquired into upon its merits; if the inspector thinks his lands will be improved, he retains them in the schedule.

983. Then it is entirely in the power of the inspector to decide whether the dissenting party be brought in or not?—Entirely so, on hearing the whole case.

984. Sir *Robert Peel.*] If two-thirds of the proprietors

prietors determine that they will have their land drained, the other third cannot resist?—No, they cannot; but I understood the question to refer to the proprietary of any particular parcel of land being included, whether it was capable of being improved by the works or not.

985. Supposing there is one large proprietor and seven or eight small ones in one district, we will say; supposing the one large proprietor dissents from having drainage works in that district, and it is absolutely necessary for the other seven or eight proprietors that their lands should be drained, would those seven or eight proprietors have power over that one large proprietor?—Not unless the value of the land belonging to them exceeded in value by two-thirds.

986. Two-thirds of that one proprietor?—Of the whole.

987. Lord *John Browne.*] It is not two-thirds of the proprietors, but two-thirds of the land?—Yes, in value.

988. Mr. *Hankey.*] Who originates the scheme in the first instance?—The proprietors themselves, one or more of them interested in the district.

989. Is it necessary that two-thirds should assent, in the first instance?—No, it is not.

990. Will you explain why?—Any individual proprietor may get up the scheme, he does it at his own expense, and submits the project to the Board of Works, the proprietor at the same time lodges a sufficient sum to cover the cost of inspection by the Board of Works' inspector, who he makes a report, which is lodged, for the information of the other proprietors. It is upon that report that they judge whether they will assent or not.

991. Might it be prepared, however small the property in the first instance, provided he was willing to pay the preliminary expenses?—It might.

992. *Chairman.*] Then one-fifth of the work must be perfected before any advance is made?—Yes.

993. And a certificate given by the inspector of the Board of Works?—Yes.

994. Is there any difficulty or complaint on the part of the proprietors upon that, in their being obliged to lay out one-fifth, for supposing the cost of a work was 50,000 *l.*, they would have to lay out 10,000 *l.*; have you heard any objections to that?—No district has sufficiently far advanced in order to test that point, but they would only have to expend one-tenth, not one-fifth—that is, one-fifth of the moiety.

995. Is that a rule which you would adhere to, or do you think it is one that, if dispensed with, would be more satisfactory in inducing the proprietors to form these districts more frequently?—It would be, undoubtedly, more satisfactory if that system were dispensed with.

996. Sir *Edward Grogan.*] Do I understand that any individual in a district who requires drainage may get a survey of it upon paying the expenses himself, and apply to the Board of Works for their sanction to the work, but that if two-thirds in value of the district are not concurring parties to the proposition, it must fall through, of course?—It must fall through.

997. But if there shall be two-thirds concurring in the drainage of the district, one-half of the expenses of the whole drainage must be subscribed for by the proprietors?—It must.

998. And the other half would be found by the Government?—Yes.

999. Then the works, we will assume, are commenced, and then the promoters of the scheme pay in labour and in other expenditure connected with the works one-fifth of their proportion, in the first instance?—Yes.

1000. Before they can get any assistance from the Government?—Precisely so.

1001. Mr. *Hankey.*] Suppose they begin a work on the 1st of January, the proprietors would have to find the whole labour, until the first instalment became due from the public works, would they not?—Yes, that would be so.

1002. Therefore they might wait for a year, before they would get recouped any portion of the money outlaid?—Yes.

1003. Would it not promote the general object, if an advance was made by the Government and the Board of Works simultaneously with the advance for expenditure that is required from the proprietors?—It is considered that these works will be executed by contract, and that a payment will not become fairly due to the contractor until one-fifth of the work has been executed.

1004. No payment at all to the contractor?—No payment whatever.

1005. Are there contractors generally to be found who would commence a work of this nature, and make the necessary advances for labour and other things, until one-fifth was completed?—I think so.

1006. *Chairman.*] In your opinion, the performance of these works by contract is most desirable?—It is the most desirable way of executing them.

1007. Do you think proprietors could execute them as well under their own superintendence as by contract?—I am satisfied they could not.

1008. And you think that in all contract works the contractor should not receive any money sooner than contemplated by the Act?—Yes.

1009. Mr. *Hankey.*] Is it not usual in a contract of this nature, that a contractor should require a certain sum to be paid down immediately the contract is signed?—No, it is not usual.

1010. *Chairman.*] Are not all Irish contracts for public works paid by instalments?—Yes, by instalments.

1011. Sir *Stafford Northcote.*] Do you suppose a contract would be taken upon more favourable terms if an advance was made?—Possibly it might be.

1012. Sir *Edward Grogan.*] We have assumed that, in the drainage districts, some of the proprietors are dissenting parties to the scheme, but are coerced to go on with it by reason of the majority being of an opposite opinion?—Yes.

1013. These works go on for the payment of the first instalment; are the gentlemen who have combined to carry on these works obliged to pay, not only their own proportion of one-tenth of the whole works, but also the proportion of one-tenth of the dissenting parties?—Certainly.

1014. There will be no distinction between the parties in the district, and when the payment becomes due the dissenting as well as the willing parties will have to contribute their quota?—They will.

1015. Lord *John Browne.*] The Board of Works lends half the money for this arterial drainage;

Colonel *M'Kerlie*, R.E. 3 April 1865.

drainage; before you lend that, do you require that a moiety should be provided for the proprietors, or raised from other sources?—We only require that the first instalment should be raised before we pay an equivalent sum.

1016. You leave the proprietors to arrange from the other half in what way they like it to proceed?—Precisely so.

1017. *Chairman.*] But you must see it expended before you give another instalment?—Yes.

1018. When one-fifth is completed you give a tenth, is that so?—Yes.

1019. Are there any other regulations of the Board of Works to which proprietors object that you think can be relaxed with advantage; has any application been made upon other points?—The only other point of importance has been in reference to the time during which the notice must be lodged; it has been suggested that the time might be materially reduced.

1020. What is the present time?—Two months.

1021. Do you think two months too long?—No; I do not in extensive districts.

1022. Does it not happen that the proprietors may be absent, and that it requires a certain time for them to see the notices?—It does so happen.

1023. Therefore you think the time ought not to be lessened?—I think it is not desirable.

1024. Is there any limit to the time that the first instalment of work must be completed?—No; there is no limit for each instalment, but there is for the whole district as to the period during which the works may be carried on.

1025. Can the Board of Works enforce the completion of the first part of the works within any time; has it any power of that kind of enforcing it?—No; I think not.

1026. What is the whole time in which the works are to be completed; is that settled by the Board of Works?—Yes, it is settled by the Board of Works with reference to the extent of the district; it may be one, two, or more years, according to the extent.

1027. Is there any provision, if the estimate is exceeded, for assessing the proprietors?—No, there is no provision for that.

1028. Suppose the money is expended and the work is incomplete, what would happen then?—The additional funds will have to be provided in the same proportion as the estimated cost was provided, I take it.

1029. And would that have to be done by a new association of the proprietors and new assents, and a new application for loan?—I apprehend not.

1030. It would be compulsory upon them to pay that?—I think so.

1031. Suppose the work becomes, before its completion, so obviously expensive that the proprietors wish to abandon it, is there any provision for that?—No, there is not; but we take every precaution, in the first instance, to guard against the possibility of such a circumstance as that.

1032. That circumstance is not provided for?—It is not.

1033. Is there any possibility of providing for it?—I do not think it possible to provide for it.

1034. Sir *Stafford Northcote.*] Do you consider that arterial drainage is proceeding as fast in Ireland as is desirable?—No, I do not think it is.

1035. I suppose the progress of other improvements, to a certain extent, depend upon the advancement of arterial drainage in those parts of the country where it is required?—It does.

1036. Do you think it is proceeding as rapidly as can be expected under the present state of the country and under the present state of the law?—I think it is.

1037. Can you suggest any additions which would enable it to be carried on more rapidly than it is at present?—The principal aid that can be given in expediting the works would be an extension of the advances.

1038. Do you mean a larger proportion of advances or a larger sum in the whole?—A larger proportion, either the whole amount or a larger proportion than a moiety.

1039. Do you think that it would be desirable that Government should advance a larger proportion?—I do.

1040. There is no limit to the sum total, is there?—No, there is not.

1041. What is the amount at present available for arterial drainages on the part of the Government?—Our general fund amounts to 385,000 *l.*

1042. How much has been taken out?—There is but one district in operation at present, and the whole cost of that district is, I think, about 7,000 *l.*; therefore, one-half of that would be all that has as yet been appropriated.

1043. Then there is at present an unappropriated balance of something like 380,000 *l.*?—Yes.

1044. Lord *John Browne.*] And you can apply as much as you like out of that 60,000 *l.* you receive from the Exchequer Loan Commissioners towards these arterial drainages?—Yes.

1045. So that there is no probability of your being short of funds at present?—No.

1046. Sir *Stafford Northcote.*] Where does that 308,000 *l.* arise from?—From the annual Vote of 60,000 *l.* or 15,000 *l.* a quarter, and from balances.

1047. *Chairman.*] And repayments?—No, they are not available.

1048. Sir *Stafford Northcote.*] Then, in fact, it represents an accumulation?—Quite so.

1049. How long has that accumulation been going on?—For a considerable number of years; I am unable to say what number.

1050. Sir *Edward Grogan.*] Sixty thousand pounds a year is the annual Vote for that purpose?—It is; and there is the balance of 65,000 *l.* from the sum of 800,000 *l.*, appropriated under the Act of 13 & 14 Vict.

1051. Lord *John Browne.*] Will you explain precisely, after these drainages are executed, how are they supposed to be kept in order?—They are supposed to be maintained and kept in order by the Board, which is appointed under the Act of Parliament, upon the completion of the works.

1052. Does that Board remain permanently?—No, there is a re-election annually.

1053. Is that ascertained in the same manner as arterial drainage under previous Acts?—In a similar manner.

1054. Have you lately inspected any of the old arterial drainages in Ireland?—No, I have not.

1055. Are you aware whether practically those drainages are kept in order or not?—In a few instances they are kept in very good order; but generally they are not.

1056. Will you go so far as to say that some of

of them are almost entirely destroyed by the neglect of the trustees in keeping them in repair?—It is so.

1057. Can you suggest any change in the law to enforce the trustees to keep these works in order, or to elect new trustees in their places, in the event of their neglecting to do so?—It would be very desirable that parties interested should have some means of redress where the works are neglected, which they have not at present.

1058. The Board of Works have not the power to interfere at present?—They have not.

1059. Have you received several communications lately requesting you to interfere?—We have received a few.

1060. Mr. *Hankey.*] And you can do nothing whatever?—No.

1061. Lord *John Browne.*] Mill dams which are affected by the drainage, are also supposed to be kept in order?—They are.

1062. Are you aware that many of those have stopped working in consequence of being out of repair?—I am not aware of it.

1063. What is the arrangement as to the repayment of the money under Colonel Dixon's Act, the Act of 1863?—It is repayable by instalments extending over 22 years.

1064. At 6½ per cent.?—Yes, principal and interest.

1065. Mr. *Hankey.*] What amount has been expended altogether under the various Acts for arterial drainage?—The total expenditure has been 2,384,000 *l.*

1066. For arterial drainage?—Yes.

1067. Over what period of time has that been?—From 1842 up to 1860.

1068. When you say 2,384,000 *l.*, is that the proportion that has been expended by the Government?—It was not all advanced in the first instance, but ultimately it has become a Government charge. In the first instance, some moneys were raised by means of debentures chargeable upon the districts, but those debentures were paid off, and Government assumed the whole responsibility.

1069. Then, simultaneously with the expenditure of 2,380,000 *l.*, had another sum equal to 2,380,000 *l.* been expended by other parties?—No.

1070. That is the regulation now?—Now it is.

1071. But it was not formerly?—Not formerly.

1072. When did that regulation first commence; by the Act of 1863?—It was the Act of 1863 which introduced the principle of Government advancing one moiety, while the other moiety was contributed by the proprietor.

1073. Previous to the Act of 1863, what was the principle upon which Government made advances?—It was laid down under the 5 & 6 Vict. c. 89, that Government might make advances for these works; and by subsequent Acts various sums were appropriated for the purpose of lending moneys in the several districts.

1074. Was it left to the discretion of the Board of Works, to what extent they might safely lend money?—With the sanction of the Treasury, it was.

1075. During this number of years, of course, large amounts have been repaid?—Considerable sums have been repaid.

1076. Can you state what is the total amount that has been repaid out of the 2,300,000 *l.* expended on the part of the Government?—£. 750,000 has been repaid.

1077. Then with respect to the total that is unpaid, 1,750,000 *l.*, remissions were made to the extent of 1,190,000 *l.*?—Yes.

1078. Will you explain what you mean, and when that took place; was it by any general measure, or by virtue of different remissions?—By virtue of different remissions, under the 16 & 17 Vict. c. 130.

1079. By that Act had the Treasury power to remit debts that had been incurred by means of moneys borrowed for those purposes?—It had.

1080. And they have exercised it largely?—Yes.

1081. To what extent have they exercised it?—To the amount of 1,190,000 *l.*

1082. Sir *Edward Grogan.*] What is the exact amount of the total advance?—£. 2,384,000.

1083. And the exact amount remitted?—£. 1,190,000.

1084. Mr. *Hankey.*] I think you said that 750,000 *l.* had been repaid?—Yes.

1085. And that there is now 1,750,000 *l.* due?—The remainder is in the course of repayment.

1086. Is the sum now due with respect to the drainage loans, amounting to between 400,000 *l.* and 500,000 *l.*, in the course of repayment?—If you will permit me, I will give it more in detail.

1087. Will you just repeat how the account stands as to the total advances, repayments, money in the course of repayment, and also the amount that has been remitted?—You want the total expenditure upon arterial drainage by loans.

1088. From the first period of the advances?—From the first period the advances or loans has been 2,243,000 *l.*, and by free grant 140,000 *l.*, making a total of 2,384,000 *l.* Of that amount 1,190,000 *l.* has been remitted to the proprietors, leaving 1,133,000 *l.* payable by them; of that sum 750,000 *l.* has been already paid, and 383,000 *l.* remains to be paid.

1089. I think you alluded to a sum of 800,000 *l.* Do I understand you to say that has been a balance of former accounts?—No; there is a balance now available of 65,000 *l.* from a sum of 800,000 *l.* advanced out of the Consolidated Fund under the Act of 13 & 14 Vict. c. 31; that balance of 65,000 *l.* remains available at present.

1090. Does the whole of that, with the exception of 140,000 *l.*, which I think you called a free grant, arise from the 60,000 *l.* a year which has been placed at the disposal of the Board of Works?—No; it arises from different sums advanced under various Acts of Parliament.

1091. When was the first Act which authorised the annual advance of 60,000 *l.* to the Board of Works?—I am sorry that I have not the means of answering that question.

1092. Perhaps you will be able to put in evidence from what sources the whole of the 2,384,000 *l.* has originated under what Acts of Parliament?—It is stated in our annual report, at page 6, that the Act of 6 & 7 Vict. c. 44, continued by subsequent Acts, grants 15,000 *l.* per quarter.

1093. That is the 60,000 *l.* a year?—Yes. Further, the Act 9 & 10 Vict. appropriated 145,000 *l.*, the 10 & 11 Vict. c. 3, appropriated 370,000 *l.*, the 12 Vict. c. 77, 200,000 *l.*, the 11 & 12

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11 & 12 Vict. c. 51, 138,648 *l.*, and the 13 & 14 Vict. 800,000 *l.*

1094. Then all these sums are quite independent of the 60,000 *l.* a year?—From the 9 & 10 Vict. these sums are independent of the 60,000 *l.* a year.

1095. Previous to the 6 & 7 Vict. had there been any advances to Ireland for drainage, that you are aware of?—Not for drainage.

1096. Then, as far as I understand, from the 6 & 7 Vict. to the present time, 60,000 *l.* a year has been appropriated?—It has.

1097. Then, in addition to that, under the five different Acts that you have enumerated, between 16,000 *l.* and 17,000 *l.* has also been appropriated, in addition to the free grant of 140,000 *l.*; that would make a total sum of somewhere about 3,000,000 *l.*?—Yes.

1098. Lord *John Browne.*] Does any portion of the money voted by Parliament, which is not drawn out of the Treasury by you, lapse back at the end of five years?—No, it remains.

1099. Does it remain there, for ever, to your credit?—It is not placed to our credit until we apply for it.

1100. But does it remain a credit for ever?—It remains a credit until it is annulled by another Act of Parliament.

1101. Does none of the money, advanced for any drainage purposes, lapse at the end of five years?—No, it does not.

1102. Sir *Edward Grogan.*] That is, the money is not advanced to you, but you may draw against it; you may apply for it?—We may apply for it.

1103. Mr. *Hankey.*] If I understand aright, in round numbers, 3,000,000 *l.* of money has been advanced in one way or other by the Government?—For arterial works, and other analagous works.

1104. And of that sum of 3,000,000 *l.*, about 1,200,000 *l.* has been altogether remitted to the proprietors by the Government?—£. 1,190,000 has been remitted.

1105. I think you stated that the total sum advanced was 2,384,000 *l.*, which included the sum of 140,000 *l.*, the amount of what you called the free grant?—Yes.

1106. How do you make that agree with the statement, which we have just received, of the sum total being about 3,000,000 *l.*?—The difference was appropriated to relief works.

1107. Sir *Edward Grogan.*] Then the arterial drainage advances amount to 2,384,000 *l.*?—Yes.

1108. Mr. *Hankey.*] Then part of those several advances authorised under these five different Acts of Parliament have been applied to other purposes?—Yes.

1109. A portion has been applied to relief works, I think; am I right in that?—Yes.

1110. When was the free grant made?—The free grant was made in respect of navigation works which were formed in connection with arterial drainage, under the 9 Vict. c. 4.

1111. There is, you say, 380,000 *l.* now in the course of periodical repayment, and which will be due from time to time, and be repayable?—£. 383,000 is repayable.

1112. Do you apprehend there will be any difficulty in recovering that amount?—None.

1113. Are the repayments irregularly made?—No; they are very fairly made.

1114. What steps are taken if the money is not paid to the Board when it is due?—If after the lapse of two months the payment of instalments is not made, the several cases are put into the hands of the Board of Works' solicitor, who proceeds to recover, and, with very few exceptions, he succeeds in doing so.

1115. I understand that you have now 380,000 *l.* available?—Yes.

1116. What portion of that arises from the grant of 60,000 *l.* a year, and what proportion out of previous grants?—£. 285,000 arises out of the annual grant of 60,000 *l.*

1117. Lord *John Browne.*] I will just read you two questions which I put to Mr. Stewart as to the lapsing of the money. I asked him at Question 937, page 39, "You draw that 60,000 *l.* out of the Treasury as you require it?" and he replied "Yes." Then I asked him, "When it has not been drawn for three years, it lapses, does it not?" and his reply was, "I believe by the Treasury regulations, all moneys voted and not applied lapse, and the balances are re-voted." Can you say whether that is so, or not?—It does not lapse.

1118. Mr. *Hankey.*] You have a very large sum of money available; do you think that by any relaxation in the mode of lending that any further applications would be induced, either by the extension of the time of repayment, or by a lower rate of interest?—I think the only way in which further applications could be induced would be by extending the powers of the Treasury to grant loans, it may be, of the whole of the necessary expenses.

1119. Sir *Edward Grogan.*] Do you mean the whole of the preliminary expenses?—No, the whole of the cost.

1120. Mr. *Hankey.*] What rates of interest are these loans now bearing?—The former loans generally bear interest at 4 per cent.; the Act of 1863 authorises loans being made at 3½ nominally.

1121. What do you mean by "nominally"?—It is not practically 3½ per cent.; it is somewhat less.

1122. Do you think that a larger amount might be lent by the Government safely, I mean safely with regard to the repayments, the charge being the first charge on the land?—I certainly think so.

1123. Then if a relaxation in that sense takes place do you think the parties would be more induced to apply for loans?—I do.

1124. Do you think that the present rate of interest, 3½ per cent., deters persons from making application?—I think not.

1125. But if there was a relaxation as to the total amount advanced, do you think that a greater number of applications would be made?—I think so, because difficulties are experienced in obtaining money from private sources.

1126. Then to what do you attribute it that only 7,000 *l.* has been advanced under the Act of 1863?—The Act is very recent, and districts have not yet been sufficiently advanced; I mean the preliminaries have not sufficiently advanced to place the parties in a position to ask for loans.

1127. But have you many applications of a preliminary nature now before you?—We have 14 or 15.

1128. Can you state in round numbers whether they would amount to a large sum or not?—In all

all probability they would amount to about 80,000 *l.*

1129. Then you have applications to the amount of probably 70,000 *l.* or 80,000 *l.* of a preliminary nature now, have you?—I should say that would be the whole cost of the works, the moiety would be 40,000 *l.*

1130. Still supposing there were applications even to the amount of 40,000 *l.* in addition to the 7,000 *l.* that you have mentioned, not more than 50,000 *l.* having been either advanced, or in a preliminary state for advance, do you not think that that is a very small amount, considering the advantages to be derived by proprietors from such advances?—I think it is.

1131. Can you assign any cause why more has not been either applied for, or in the course of being applied for?—One cause is that the proprietors have not yet had time to make the necessary inquiries and investigations; another cause is that they are deterred by the fear of not being able to raise the necessary funds.

1132. Sir *Robert Peel.*] Is it not rather owing to the complicated provisions of the Act of 1863, than anything else?—No, I think not.

1133. Mr. *Hankey.*] I will repeat the question that I asked you before; I think I understood you to say that your impression was, that if the Government advanced either the whole or the larger proportion than is stipulated for under the Act of 1863, you would have a greater number of applications?—Probably we should.

1134. Lord *John Browne.*] Is there any reason why Government should not advance the whole in the same way as they do for land improvement?—I am not aware of any reason.

1135. Mr. *Hankey.*] Do you think that might safely be done?—I think it might.

1136. Sir *Robert Peel.*] I think you say that you have 13 or 14 applications under the Act of 1863?—Yes.

1137. Are you sure that you are correct. I heard the other day that there were only seven?—We are aware of 13 or 14 districts in which the preliminaries are more or less advanced.

1138. But you surely have not had 14 or 15 applications, have you?—We have had 14 or 15 enquiries in which we are aware of preliminary steps having been taken, but we have, I think, nine applications.

1139. Have you not heard of complaints with respect to the Act of 1863?—Yes.

1140. I mean complaints that the complicated provisions of that Act interfere with the beneficial operations of these advances on the part of the person wishing to avail himself of them?—I have not heard complaints of its being complicated.

1141. What complaints have reached you in respect of it?—There have been complaints of the difficulty of bringing the Act into operation by reason of the difficulty of obtaining money.

1142. *Chairman.*] That is the moiety?—Yes.

1143. Sir *Robert Peel.*] But surely that arises from the complicated provisions of the Act, does it not; is there a necessity to go again to Parliament?—It would be necessary to go again to Parliament to obtain an extension of the powers of lending.

1144. You say that about 2,380,000 *l.* has been advanced for arterial drainage, and that of that amount 1,190,000 *l.* has been remitted to the proprietors?—Yes.

1145. But when those grants were originally made, they were made upon the understanding that they were to be a first charge upon the land that was to be benefited by the grant, were they not?—They were.

1146. Why were they remitted?—Because it was found that the benefits conferred upon proprietors were incommensurate with the cost to them; the proprietors complained of the cost, and upon a preliminary inquiry, an Act was introduced, 16 & 17 Vict., and passed, authorising the Treasury to remit such sums as upon inquiry they might deem just and fair to remit.

1147. But does not that imply great blame to the Board of Works as to their having so ill-regulated the expenditure as to oblige Parliament to remit the sum of 1,190,000 *l.*; you said, just now, that cases might occur where you could ascertain as to the certainty of the work?—I said that would be so in future.

1148. Was any portion of this amount of 1,190,000 *l.* remitted because it was for the purpose of deepening rivers?—Not specially on that account; there was little experience on the part of engineers when these works were first undertaken; and the designs which were considered to be sufficient, in the first instance, were found, as the works progressed, to be ineffectual in relieving the lands from floods; the consequence was, the works were enlarged very materially; the cost was necessarily enlarged, and the estimates were exceeded.

1149. And, therefore, it was that this amount of 1,190,000 *l.* was remitted to the proprietors?—Yes.

1150. In what counties where the proprietors who enjoyed this enormous benefit?—I believe, in every county in Ireland.

1151. Would it not be very difficult to resist an application from parties owing this 380,000 *l.* upon the ground that they should be treated with the same liberality as the proprietors in the former case?—They are the same persons who did receive the benefit.

1152. Perhaps you will say that a portion of this remission was owing to the necessity, or what was then considered the necessity, of the relief works during the pressure of the Famine in 1846, 1847 and 1848?—A very considerable portion of the works were, no doubt, undertaken with a view to affording relief, and consequently were not undertaken under such favourable circumstances as they otherwise might have been.

1153. You state the 2,384,000 *l.* was advanced under different Acts of Parliament for the purposes of arterial drainage?—Yes.

1154. But you explained just now to Mr. Hankey that a very great portion of that had gone for buildings, I think?—No, for relief works and other works which I am not able to explain.

1155. Did any portion of that 2,384,000 *l.* go for relief works?—No, certainly not; I beg pardon there.

1156. You say that a great portion of the 1,190,000 *l.* went for relief works; how was that?—I distinguished drainage works from relief works; drainage works were, to a certain extent, made available for relief purposes, but I distinguished them altogether from relief works proper.

1157. Then you think, on the whole, that it would be for the interests of the country that some relaxation of the present system as regards advances for such works as these in Ireland should take place?—I think it would be very desirable.

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1158. In fact, if it were put to you, you would recommend, as Chairman of the Board of Works, that the Treasury should advance the whole of the money, and then that it should be repaid by instalments, those instalments being a first charge upon the land instead of being, as it is at present, an advance only after a similar sum has been advanced by the proprietors?—Yes, that would certainly be my advice.

1159. And you think, looking at the interests of the country, and the way we suffer in Ireland from the amount of inundation which takes place, that it would be desirable that Parliament should act in that spirit from your experience of the country?—If I might venture to express an opinion upon such a point, I should say that it would be very desirable that that advantage should be afforded.

1160. Mr. *Hankey.*] Is it your opinion that the sum of 2,384,000 *l.*, or the sum generally advanced, has been advanced advantageously to the interests of Ireland?—Unquestionably so.

1161. And that the proprietors have derived substantial benefit from those advances?—Fully to the amount charged.

1162. Have you had any opportunity of judging and forming an opinion whether it has given an adequate and fair return for these advances, and whether the system has been remunerative generally to the proprietors; I do not mean to confine it to the Government advances, but speaking of the total amount that has been laid out in that way?—I think the proprietors have had a full return for the amount which they have been required to pay.

1163. Mr. *Banks Stanhope.*] I think you said you would advise that the whole sum should be lent by the Government?—I did.

1164. If the whole sum is lent to the proprietors, at the present charge of 6½ per cent. for 22 years, might not the heaviness of that annual charge prevent proprietors from applying?—It would not prevent them from applying, but it might prevent them from availing themselves of the powers of the Act, when all things become known, when the project is fully investigated.

1165. Then it comes practically to this, that the heaviness of the charge might prevent their carrying out their original intention of starting any great system of arterial drainage?—It might; but the Board of Works would feel it their duty not to sanction the carrying out of any works which would not afford an adequate return.

1166. Would not this charge of 6½ per cent. for 22 years prevent a great deal of arterial drainage being undertaken, which under less stringent terms might be undertaken?—To some extent, that might be so.

1167. If the repayment of the loan was extended for a longer time, at a less heavy annual charge, do you not think that there would be a more general disposition to carry out these works?—Yes.

1168. Would you see any practical objection to extending the term of loans, say to 35 or 40 years, with a corresponding diminution of the annual charge?—Yes, I think that would be objectionable, inasmuch as the proprietors in different districts, if the instalments were spread over periods differing in extent, might not clearly understand the ground upon which the difference was made, and might feel dissatisfied and jealous of advantages given to one more than to another.

1169. Would there be any objection to make your general system of advances for arterial drainage upon the plan that I suggest, of extending the repayment over a longer time, with a corresponding diminution of the annual charge?—While I think that considerable advantage would be gained by admitting districts which otherwise would be objected to by the Board of Works, yet I think, upon the other hand, there are counter-balancing objections arising from the circumstances which I have mentioned, of proprietors perceiving a difference in the number of years over which the annuity was spread, and not understanding the ground upon which it was made.

1170. Assuming that the proprietors of any district were given the option of repayment, according to your present term of 22 years, at 6½ per cent. annual charge, or a repayment over a longer period at a less annual charge, would not that meet your objection?—It would admit of a greater extension of the benefits of the Act.

1171. Might it not lead to this one great advantage, that the improvement of the arterial drainage would be carried on more rapidly than it is at present?—It might, to some increased extent, induce proprietors to avail themselves of the benefits of the Act.

1172. There would be no loss actually to the country in advancing the money for a longer term than there would upon a shorter term, would there?—There would not.

1173. And therefore, practically, without any loss to the Government, the optional extension of a longer term might possibly lead persons to apply for money to carry out arterial drainage when they might not do so if they were compelled to adhere to the present system?—Yes.

1174. Sir *Edward Grogan.*] You expressed the opinion, speaking of the Act of 1863, that a larger amount than one-half of the cost necessary for a drainage district might be usefully advanced by the Treasury?—Yes.

1175. Are you of opinion that the whole of the money necessary to carry out those works might be advanced by the Treasury?—I am.

1176. In that event, assuming that the Treasury, with the sanction of Parliament, should take your view, and consent to advance the whole of the amount necessary for the drainage of a district, do you consider that any greater control should be exercised by the Treasury, or by your Board under the Treasury, in the selection of the districts than exists at present?—No; I think our responsibilities are quite as great now as they could be under the altered circumstances of an extension of the loans.

1177. At present any body of gentlemen in a district desiring to have their district drained, make the application to you?—They do.

1178. It originates entirely with them?—It does.

1179. Would you, under the supposition that the Treasury were to advance the whole of the money in the first instance, conceive it safe and right to continue that discretionary power in the same proprietors?—Certainly.

1180. With regard to the execution of the works under the Act of 1863, those works are to be executed by a contractor under the supervision and control of the proprietors?—It is not stated that

that a contractor shall be employed; but that is a condition that we should consider indispensably necessary.

1181. Under the altered circumstances of the Treasury advancing the whole of the money in the first instance, would you consider that any greater control than you at present possess over the execution of the works would be necessary to be vested in the Board of Works?—No, I do not consider that necessary.

1182. Then when a drainage district is approved of, and the cost to be expended upon that drainage in that district is approved of, and the money advanced by the Treasury; how would you then propose that the work should be carried out?—By the proprietors themselves, as is the case at present.

1183. And you think that requiring them to contract with some responsible individual is a sufficient security for the due execution of the works?—I do.

1184. Would you consider it necessary to have an inspection on the part of your Board to see that the works were duly carried out?—The same inspection that we make under the existing Act periodically. It might be desirable that this inspection should be made more frequently, if the whole of the money was advanced by the Government; but I do not think that is material.

1185. If your inspector should have reason to disapprove of the mode in which any part of the work has been executed, what is the remedy?—He would represent it to the Board of Works, the Board would call the attention of the Drainage Board to it, and request that such remedial measures should be taken as might appear desirable.

1186. And if that recommendation of the Board of Works was unattended to, would the Board think themselves authorised to withhold any further advances?—I think so.

1187. Practically, then, would not that amount to a control on the part of the Board of Works, and to a responsibility of the Board with regard to the completion of the works themselves?—Undoubtedly it practically results in this, that the Board of Works would have the supreme control over them.

1188. And having the supreme control, they would of course have the supreme responsibility?—Certainly.

1189. There have only been ten applications to you altogether, I believe, under the Act of 1863, one of which, that of Thurles, has been since abandoned?—It has.

1190. Then there are nine before you?—I think that is the number.

1191. Of those nine you stated that there was only one in progress?—Only one.

1192. How many proprietors are there in that one; is it the case of only two or three proprietors, or of the general public, as we might say?—I am unable to state the exact number, but I think there are 13 or 14.

1193. So many?—I think so.

1194. Would the Board of Works at present make any advance under the old Arterial Drainage Acts?—No.

1195. Not now?—Not now.

1196. So that unless they work under the Act of 1863, they cannot get arterial drainage at all?—No, they cannot.

1197. Is it within your knowledge that any of the proprietors in Ireland would wish to work under the old Drainage Acts and under your Board?—No, it is not within my knowledge.

1198. Have any complaints been made that they cannot work under them?—I have heard of no complaints of that kind.

1199. Do you conceive the feeling to be general, that a body of gentlemen in a district should have the whole and sole absolute control of the execution of these works; or that the sole control of their execution should be entrusted to your Board?—The general feeling is that they should be under the sole control of the proprietors, as has been provided in the Act of 1863.

1200. Of the local proprietors?—Yes.

1201. Under the Act of 1863, we will suppose a case; that the preliminary steps have been taken, and a district formed, a contract entered into, and part of the works executed; is there anything in the Act to prevent any one or more of the proprietors who shall have been original parties to this drainage system withdrawing from it?—I think there is.

1202. Do you mean that they may withdraw?—They may not withdraw.

1203. Then if they join originally in the application to your Board, whether they approve of the works that are going on, or whether they change their mind as to the benefit likely to arise to them from it, they are forced to go on; is that what you mean?—They are forced to go on.

1204. Then such a state of things could not arise as this—that some of the proprietors of a river, for instance, anxious to discharge their own lands of the water, and entering into a scheme for that purpose, could not, when the works were executed upon their particular portion of the land, withdraw from it?—They could not withdraw from it after the scheme was once formed and an Act obtained confirming the original order of the Board.

1205. They must go through with it?—They must go through with it.

1206. You state that the advances have been heretofore made at the rate of 4 per cent.?—Upon the old drainage works it was 4 per cent.

1207. What would it be under the Act of 1863?—Three and a-half per cent.

1208. What proportion of the principal would be annually paid to make up that 6½ per cent.?—Three per cent.

1209. Is it within your knowledge what the average increased value of the lands from the drainage that has taken place would amount to?—The average cost per acre of draining the lands under the former Act of Parliament, I mean those antecedent to 1863, was 6*l.* 17*s.* 7*d.*, and the amount of the return was 4*l.* 1*s.* 10*d.* per cent. per annum.

1210. There was an average annual increase on the lands drained of 4 per cent.?—Yes; that is on the whole cost, including the amount remitted.

1211. Sir *Stafford Northcote.*] Four per cent. on what?—On the whole amount, on the total outlay.

1212. Do you mean on the 6*l.* 17*s.*?—Yes.

1213. *Chairman.*] How do you make the estimate of the increased value?—There is the whole cost of the arterial drainage works, the number of acres improved, the annual improved value.

1214. How is that estimated?—The annual improved value is determined by a valuator employed specially for that purpose.

1215. And subsequent to the works?—In some

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some instances before the works are commenced, in others subsequent to their being completed.

1216. But would it be of any value if made before the works were commenced?—Yes; it would be more valuable than that made subsequent to their being completed, because after the works were completed they are re-valued, and the anticipated value of the improvement is tested by the actual results.

1217. Sir *Stafford Northcote.*] And how do they generally come out?—Where the work has been valued before the works were begun, and again after they are completed, it is found that the anticipated amount of improvement is realised or nearly so.

1218. *Chairman.*] Is that upon an average, or in each particular district?—In each particular district.

1219. Have you made any calculation of what is the benefit which the proprietor receives on the amount charged?—Yes; in 51 districts in which no remissions were made the cost per acre was 3*l.* 6*s.* 5*d.*, and the return yielded to the proprietor amounted to 9*l.* 9*s.* 8*d.* per cent. per annum; in 58 districts in which remissions were made the cost charged to the proprietors per acre was 3*l.* 9*s.*, and the amount of the return was 8*l.* 8*s.* 11*d.* per cent. per annum.

1220. And the remissions, how much were they?—Without the remissions, the cost was 7*l.* 11*s.* 5*d.* per acre per annum, and the return only 3*l.* 17*s.* per cent.

1221. Sir *Edward Grogan.*] Then the effect of the remission sanctioned by the Act of 15 & 16 Vict., and adopted by the Treasury, was, in a great degree, to bring both classes of districts on an equality?—It was so.

1222. You say that the total amount of the remission was 1,190,000 *l.* under the Act of 16 & 17 Vict; that was, as you explained it, because the return to the proprietors, the profit, would be inadequate if they were charged the entire amount?—That was so.

1223. You have alluded to a sum of 140,000 *l.* which you called a free grant; that was under the 9 Vict.?—It was.

1224. And at the time of the 16 & 17 Vict., when that inquiry, and the large remission took place, of course that sum of 140,000 *l.* free grant, was under the consideration of the Commissioners, and they were aware of the amount?—That grant was unaffected by the subsequent remissions.

1225. What I mean is this, that a free grant having taken place under 9 Vict., and the remissions being under the 16 & 17 Vict., the Commissioners who investigated and settled the amount of remission which the Treasury would be justified in making, had full knowledge of that previous free grant?—They had, but I should explain that that free grant was in respect of navigation, not in respect of drainage.

1226. Accordingly we are not to mix up that free grant of 140,000 *l.*, or consider that as additional to the remission for drainage purposes that has taken place?—No, certainly not.

1227. Then would it be your opinion that two-thirds of the proprietors of the drainage districts, agreeing in the propriety of draining a district, should make an application, as they do now, under the Act of 1863, to your Board, that if your Board considered the project useful and beneficial to the country, they might sanction it, and that upon their sanctioning it, the Treasury should then be authorised to make all the necessary advances for carrying on the works under your supervision and control?—All the preliminaries having been completed, and the sanction of the Board having been given in the form of a Provisional Order, then, I think, it would be very desirable that the fullest amount of assistance should be given by the Government; but I consider that it would be very undesirable that the supervision of the works should be taken from the proprietors; but that should be left entirely in their hands, as it is at present.

1228. But the ultimate supervision, and the ultimate control over the execution of the works, should be under your own officers?—The ultimate control, in as far as it would be our duty to see; the money was not advanced unless it was all properly applied.

1229. And your approval of the mode in which the advance has been applied would be necessary before any subsequent advance?—Certainly.

1230. We will assume all these acts to have been done; what is the next stage, under the Act of 1863, to legalise the whole of these proceedings?—The next step is to obtain an Act of Parliament confirming the Provisional Order of the Board of Works.

1231. Do you consider that absolutely necessary?—It is a cause of delay in some instances, but I think it very desirable that it should remain as it is.

1232. Does it not necessarily lead to a delay of some five or six months—it might be of nine or ten—before these works, which are admitted to be useful and necessary to the country, can be undertaken?—It might lead to delays in some instances, varying from two months to eight.

1233. If your Board should have approved, after inquiry, of the undertaking as being beneficial to the district intended to be drained, is not an application for an Act of Parliament to clothe it with the nature of a law almost a superfluous proceeding?—No; I should not be disposed to call it superfluous. I think that very considerable advantages attend it, inasmuch as it gives a means of appeal in the case of proprietors who may be dissatisfied.

1234. You mean it would enable proprietors who might be dissatisfied to prevent the passing of the Act in the House?—That is what I mean.

1235. Have dissatisfied proprietors now any appeal?—They have no appeal after the confirmatory Act has been obtained.

1236. But before the Confirmatory Act, in the progress of the proceedings, if they are dissatisfied with the expenditure, or the works, or the award, cannot they appeal against your decision?—They have no appeal after our Provisional Order is given, unless to Parliament.

1237. Is that so?—It is.

1238. Have they no appeal to the Courts?—They have no appeal to the Courts.

1239. Would you think that an appeal to the Courts in Ireland would be a more effectual and satisfactory mode of effecting the objects which individuals might have, than entering an appeal in Parliament, which would depend upon so many casual circumstances whether it was effectual or not?—I do not think the Courts would be a desirable mode of appeal.

1240. A Confirmation Act, such as you alluded to, is brought in under the authority of the Government, is it not?—Yes.

1241. The

1241. The Government are acting under the responsibility and advice of your Board?—Yes.

1242. Consequently, the decision of your Board is practically the final settlement of the case?—Still there is an opportunity left for any gentleman to appeal to Parliament against our Provisional Order, if they think proper to do so.

1243. If a dissatisfied individual, having the power of applying to one of the superior courts and having his cause there tried, it might be by jury, and the whole facts investigated by those means, would that, in your opinion, be as satisfactory, or more so, than taking the chance of opposing an Act of Parliament in the House?—I do not think it would be so satisfactory.

1244. Mr. *Banks Stanhope.*] I think I understand you to say that you have no power at present in your Board of maintaining in good condition the improved arterial drainage?—We have not.

1245. Is there any machinery at all by which this is done?—Yes, there is a means of appeal, by application to the Court of Queen's Bench, I believe.

1246. Sir *Edward Grogan.*] Is that in the Act of 1863?—No, under former Acts.

1247. Mr. *Banks Stanhope.*] Then am I to understand that if any arterial drainage was now undertaken, and if that arterial drainage was not to be maintained, there is no power of compelling the proper maintenance of it, except by application to the Court of Queen's Bench?—Yes, the award makes the necessary provision for levying rates for the purpose of maintenance, and it is the duty of the Drainage Board, which is appointed to see to their maintenance, to take all the necessary measures with regard to it; and if a proprietor or tenant feel that his interests are neglected, and he cannot obtain redress from the Drainage Board, then I believe the only remedy open to him is to apply, as I have mentioned, to the Court of Queen's Bench.

1248. Does the Drainage Board always remain *en permanence*?—No; a re-election takes place annually.

1249. But there always is a Drainage Board?—It is presumed so.

1250. Is the re-election compulsory?—It is, by Act of Parliament.

1251. Have the Drainage Board a power of levying rates?—They have.

1252. For maintenance?—For maintenance.

1253. Can you suggest any method by which that Drainage Board should be compelled to do its duty, instead of resorting to the legal application?—I am not quite prepared to answer that question, although it is one that we have had a good deal under consideration.

1254. If I understand the matter aright, at present it might be possible that a Board might lapse; there are no penalties, I believe?—There are no penalties.

1255. It is also possible that the arterial drainage might become in a very bad state, is that not so?—It is possible; although, under the existing law, so long as the instalments remain due, they must necessarily have some officer to carry out the collection of the rates.

1256. Has the same officer the power of maintaining the drainage and levying a fresh rate?—He has the power, under the Drainage Board, of levying such rates as they may think necessary, for maintenance as well as the levying of the instalments which are payable on account of the improvements.

1257. Supposing the Drainage Board was not to meet, he would have the power of levying the original instalment for repayment, I suppose, without the authority of the Board?—Not without the authority of the Board; the Board must continue to exist.

1258. Lord *John Browne.*] The rate that is levied for maintenance is quite separate and distinct from the money that is repaid to the Board of Works, is it not?—Quite separate.

1259. As to the rate levied by the trustees, it is optional with the trustees to levy that rate or not?—It is.

1260. And nobody but the trustees can levy that rate?—None.

1261. If they neglect to levy the rate, and let the works go out of repair, there is no power to force them to do their duty, except an action at common law; is that so?—That is so.

1262. Then, if the trustees do not meet, the tenant who is injured has practically no redress whatever?—Practically so.

1263. Are you aware that at a meeting of the grand jury of the county of Mayo, last year, a resolution was passed suggesting that the law should be changed, and that powers should be given to the grand jury to make presentments for keeping such works in repair, when it was proved to them that they had been allowed to go out of repair, and that money should be levied as grand jury cess, but from the owner of the land?—Not that I am aware of.

1264. Have suggestions been made to you that the Board of Works should have power to step in where the trustees have neglected their duty, and enforce the repair of these works?—Such suggestions have been made.

1265. Have you considered those suggestions?—Yes, we have considered them.

1266. Are you prepared to give an opinion upon that point?—The Board of Works are very reluctant to step in to interfere with the works, but at the same time it appears necessary that some such course as that adverted to should be open.

1267. What do you think would be the best way of doing it, through your office?—I think it would be, particularly should any alteration be made in the law, with regard to the amount of Government advances.

1268. I mean with regard to the maintenance?—Quite so.

1269. After a certain period, whether a short or a long period, the money would be repaid to the Treasury; after that, what machinery ought to be kept in pay in order to maintain the drainage?—We have not looked so far forward as that.

1270. But I wish you to look forward, so clearly that in another generation there should be some machinery by which all the arterial drainage works that have been undertaken should be maintained?—It is most desirable.

1271. What machinery can you suggest by which the arterial drainage, when once improved, can be maintained in that improved condition?—I am not prepared to make a suggestion.

1272. The remission of the 1,190,000 *l.* was made, I think you said, under the 16 and 17 Vict. c. 130?—Yes.

1273. Will you be good enough to look at that

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Return (*handing it to the Witness*); that is dated 1858, is it not?—Yes, 17th June 1858.

1274. Will you state what is the amount of remission made according to that Return?—£. 461,973.

1275. No remissions were made subsequent to 1858, were they?—Oh, yes.

1276. Sir *Robert Peel.*] To the amount of 700,000 *l.*?—In our last Annual Report the amounts are given.

1277. Will you state what they are?—In the fourth column, the total amount of expenditure for all purposes is 2,384,000 *l.*, page 60: the proportion of total expenditure charged to the accounts for public works is 151,000 *l.*, and the proportion of total expenditure charged upon lands, 902,000 *l.*; the amount of the remissions is 1,190,000 *l.*

1278. Lord *John Browne.*] Can you tell the Committee how much remission has been made subsequent to that Return?—The difference would be in the amounts.

1279. Sir *Robert Peel.*] There have been no remissions of late years, have there?—Yes, there have.

1280. Within the last four or five years?—Not within the last four or five years. I think the last was in 1860.

1281. According to that Return, 700,000 *l.* must have been remitted between 1858 and 1860?—The difference accrues between the dates of those two Returns.

1282. That is, in two years?—Yes.

1283. Sir *Stafford Northcote.*] Was all that remission for arterial drainage?—Not altogether.

1284. Lord *John Browne.*] Can you mention what other purposes remissions were made for, except for arterial drainage?—Do you mean included under the head of arterial drainage?

1285. No. You say remissions were made for other works besides arterial drainage; can you state for what other works those remissions were made?—There were four navigations in connection with arterial drainage undertaken and carried out; it was in respect of these navigations that the free grant was made that has been spoken of as 140,000 *l.*

1286. Was Loch Carrib one?—Yes, Loch Carrib was one; the Shannon and Erne Junction Canal was another, and Loch Neagh was another.

1287. And those are included in the 1,190,000 *l.* which you talked of as remissions on account of arterial drainage?—They are included in that amount.

1288. Sir *Stafford Northcote.*] And they are not included in the Return of 1858?—They are not.

1289. Would that account for the difference of 700,000 *l.*, or does the difference of the 700,000 *l.* arise from the remissions since that Return was made?—It arises from both the navigation and the drainage completed subsequent to the date of the Return; none of the navigations were completed until subsequent to that Return.

1290. Do you suppose that as much as 700,000 *l.* has been remitted upon arterial drainage and navigation since 1858?—There must have been, from the difference in the figures on these Returns.

1291. Lord *John Browne.*] The Loch Carrib Navigation was one of the most expensive of those which were undertaken, was it not?—It was a very expensive one.

1292. And that was abandoned entirely, and is utterly useless now, is it not?—No; it is not useless.

1293. Is there any water in the canal?—It is the Junction Canal between Loch Carrib and Loch Mask that has been abandoned.

1294. An enormous sum was spent there, I think?—£. 40,000.

1295. And beyond, up at Ballinrobe?—A very small sum was spent there; I believe only about 3,000 *l.*

1296. Sir *Robert Peel.*] It would appear that a great portion of these remissions have no connection whatever with arterial drainage?—The works in respect of which they were made were undertaken under the same Act and in connection with arterial drainage; they were not permitted to be undertaken by themselves, except as connected with arterial drainage.

1297. For instance, Loch Neagh, that has no necessary connection with arterial drainage, has it?—The lowering of the level of the Loch made in connection with the navigation affords facilities for arterial drainage.

1298. Lord *John Browne.*] The 47,000 *l.* that was spent between Loch Carrib and Loch Mask was of no benefit whatever for the purpose of drainage, was it?—None whatever.

1299. *Chairman.*] Could you put in a Return of those different sums and the application of them?—It is entirely stated in our annual report. Perhaps I may be allowed to correct what I said just now. The canal which was abandoned has some connection with arterial drainage; it is now made use of to discharge the flood waters, and sluices are placed in it with the special object of regulating the level of Loch Mask.

1300. Lord *John Browne.*] Do you recollect the circumstances under which the sluice-gate was erected; was not the drainage completed, as far as drainage purposes were required, before that sluice-gate was erected; proprietors themselves complained that you had lowered the level of the Upper Lake so much as to expose a quantity of bare rock in front of their windows, and that sluice-gate was then put up for the purpose of maintaining the level of the Upper Lake at such a rate that those rocks should be covered and be no longer unsightly from the residences of those who were complaining; and was not the cost of the sluice-gate extremely trifling?—It was always intended that there should be regulating works at the head of the canal for the purpose of maintaining the proper level of Loch Mask. When the works were abandoned, those works were not carried out as originally intended, but sluice-gates were put up as a substitute, for the same purpose, of regulating the water of Loch Mask.

1301. Is not the level of the lake at the present moment the same as it was previous to these works being commenced, within a foot or so?—The waters at their summer level, as far as my recollection serves, do not vary materially from the former summer level. I believe they have been reduced one or two feet, but the winter floods have been kept down several feet; the waters have been regulated.

1302. Sir *Edward Grogan.*] What proportion of Ireland at large do you consider has been benefited by arterial drainage, under the Acts anterior to 1863?—The actual extent of lands relieved from flood or water is 266,444 acres.

1303. That

1303. That is a small proportion of the whole surface of the country, of course?—It is.

1304. Those 266,000 acres that you now refer to, are those upon which your estimate of the increased value given to the land is based?—Yes.

1305. Is there not a very much larger proportion of the country to which these works have not been extended, and to which they might be beneficially extended?—Probably as much more.

1306. Has your attention been called to a Return which was made to this House, on the motion of Viscount Duncan, on that subject, showing the works that have been done and completed, the works that were proceeding, the works that were commenced and not completed, and the different stages of completion, and those where nothing at all has been done?—Yes, I am acquainted with the circumstances of that Return.

1307. Looking at these different classes of cases, if I may so call them, and to the fact of there being 236 summary proceedings where no report has been made, can there be any reason whatever to suppose that, if these works had been carried out in the same manner as the works that have been completed, equal benefit would have resulted to the district of country where they were situated?—Yes, probably, but also equal loss.

1308. Do you mean loss to the proprietors?—Loss to the public.

1309. To the Treasury?—To the Treasury.

1310. That is, if the works in those districts, which I may say are untouched, had been executed in the same manner, a considerably increased amount of loss would have accrued to the public?—Certainly.

1311. But if they had been executed in the manner in which we expect they would now be executed, what reason would you have had for apprehending loss?—None whatever.

1312. There can be no reason why the drainage should not be extended into those districts the same as others?—There is no apparent reason.

1313. Do you conceive that the Act of 1863, amended as you have suggested, would be the best mode of extending those benefits to other parts of Ireland?—Yes.

1314. In preference to a recurrence of the Drainage Acts previous to 1863?—Yes.

1315. The *O'Conor Don.*] You were asked some questions in cases where the Local Board for the maintenance of works did not do their duty; in case the Local Boards did levy or lay down an annual rate, what power would they have of enforcing it, if a proprietor objects?—They would have the same power of enforcing the rates for maintenance as the Board of Works have for the recovery of instalments.

1316. There is no appeal from the Local Board to the Board of Works against the allotment of the annual rate, is there?—No, there is not.

1317. *Chairman.*] You are also acquainted with the mode in which advances are made for thorough drainage?—Yes, I am generally so.

1318. There has been no recent change in the form of it?—There has been no recent change.

1319. Is there the same system of inspection from time to time?—Yes.

1320. And issues made upon the certificates of performance in the same way?—Yes, just the same.

1321. There is a limit to the amount granted to any one proprietor, is there not, of 5,000*l.*?—To 8,000*l.* it is now.

1322. Do you think that is quite sufficient for any proprietor in Ireland, or do you think there is any necessity for extending it?—In very extensive estates, probably an extension of the loan might be advantageously given.

1323. Has any application for that purpose been made?—No, I am not aware of any recently.

1324. The loans have been issued for farm buildings, have they not?—Yes.

1325. Those are not farm dwellings?—No.

1326. Do you think there would be any advantage, as has been suggested by some persons, if loans were allowed to be made for farm dwellings?—It has always been considered that there would be a dwelling upon the farm for which the improvements asked for were required; and without further consideration I would beg to decline saying whether I thought it was advisable to extend it to farmhouses or not.

1327. Are you aware that application has been made from Meath and those districts where drainage is not desirable, for loans for this purpose?—I am not aware of any application.

1328. Are you aware that it has been wished to extend the power of giving loans for the erection of machinery for farm purposes; would you think that desirable?—No, I think not.

1329. It is extended to scutching mills, is it not?—Not for machinery; for the mills only.

1330. That is, the mere walls?—The mere walls; the building.

1331. But not for the machinery?—No.

1332. Do you think it would be desirable to extend it to machinery, if it was confined to machinery for agricultural purposes, such as scutching mills, saw mills, or things of that kind?—It has always been considered undesirable to lend money for the erection of machinery, I believe, in consequence of its liability to get out of repair from neglect, and from other general considerations.

1333. Do you think the security would be equally good for it?—I think not.

1334. What would be the security in advancing for machinery; has it ever occurred to you that, in addition to the machine itself, there might be some collateral security?—I have not considered that.

1335. If the proprietor of the estate gave a sufficient security, collateral with the machinery itself, do you think there would be any objection to that?—I apprehend there would be objections to it.

1336. But you are not prepared to state them?—I am not prepared to go into particulars.

1337. Have you heard any complaints or objections as to the specifications required by the Board of Works, and the terms that are enforced by them in the case of loans for farm buildings?—The only objections I have heard of have had reference to the employment of native timber.

1338. The Board of Works, I believe, insist upon the use of foreign timber?—Yes.

1339. Is it not possible to find, in some places in Ireland, timber that would be sufficiently good for those works?—Certainly, the timber would be sufficiently good, if it was properly seasoned; but the danger is that it will not be seasoned.

1340. Does not the employment of foreign timber

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timber increase the price of the work, and thereby deter proprietors who are possessed of their own timber from doing it?—It certainly increases the price of the work, and so far, probably, has the effect of deterring proprietors.

1341. Do you think that the application of loans to the erection of fishing piers on the coast would be an advantage?—Yes; we have at present powers both to make grants and loans for the erection of such. Our fund is nearly exhausted, and we are applying for a renewing Act at the present time.

1342. That is a separate fund from the thorough drainage fund, is it not?—Entirely.

1343. It is a special fund for that purpose?—It is a special vote under the Act for that purpose.

1344. Sir *Edward Grogan.*] What is the annual amount?—There is no annual amount; it is a specific sum, without reference to the period for which it shall be applicable.

1345. *Chairman.*] In the thorough drainage operations, if the inspector does not report the work properly done, do you stop the instalments until it is reported done?—Yes.

1346. Have there been any instances of the drainage being thrown up before it has been completed?—There have been several cases.

1347. What is the course then taken by the Board?—The Board, upon the relinquishment of any number of instalments, make an award for the amount that has been issued, requiring it to be paid in conformity with the Act, at 6 $\frac{1}{2}$ per cent. over the regulated period.

1348. Are the instalments that have been paid forfeited?—They are not; they remain a charge upon the lands.

1349. And the remainder not being advanced is cancelled?—It is cancelled.

1350. When does the repayment of instalments commence, after the drainage of the land is completed?—It commences immediately after the issue of the first instalment.

1351. The repayment does?—Yes.

1352. In the case of a drainage being given up, are those instalments that have been repaid credited to the person paying them?—Certainly.

1353. In all cases?—In all cases.

1354. Have you any suggestion to make or that has been made to you, as Chairman of the Board of Works, that you approve of, as to any improvement in the method of granting these loans, that would make it more desirable to the country?—I have had no suggestion made to me for the improvement of the loan system for land improvement.

1355. Do you think that the extension of time for repayment would be a desirable thing?—No, I think not.

1356. Do you think there might be anything less than the 6 *l.* 10 *s.*, which in 22 years repays the amount borrowed, that there could be better terms than that, practically?—I think the terms are very favourable.

1357. Do the Treasury make by lending the money at that rate?—No.

1358. They do not lose?—No.

1359. But have they not generally made by the advances in Ireland?—Yes, under the former loans, which were made under the original Act of Parliament empowering the Public Works Commissioners to advance monies, whether to counties, or to public bodies, or private individuals, the rate of interest charged was 5 per cent., and of course Government had the advantage of the difference between that and the Government rate of interest.

1360. Mr. *Hankey.*] What is the meaning of the Government rate of interest?—The rate of interest chargeable upon Government stock.

1361. Do you mean the rate of interest at which the Government could have borrowed money?—Quite so.

1362. *Chairman.*] Then you do not think that proprietors could expect any more favourable terms than they have at this moment?—No.

1363. And you can make no suggestion as to any improvement?—No.

1364. Sir *Stafford Northcote.*] Could you make out for the Committee a Return showing at one view all the specific sums that have been at different periods advanced for the purposes of improvement in Ireland, the amount of each of those sums that has been issued, the amount that has been remitted, the amount that has been repaid, and the amount outstanding?—Yes; I can do so.

1365. Lord *John Browne.*] If an application is made to you for a loan for the erection of farm buildings, you require the tenant to lay out 200 *l.* upon the house out of his own moneys, do you not?—I do not recollect the regulation; it is not provided for in the Act of Parliament; it must be a Treasury regulation.

1366. Will you refer to Mr. Stewart's evidence, beginning at Question No. 952?—(*After looking at the Evidence.*)—I do not remember that regulation.

1367. But you see it is in Mr. Stewart's evidence?—I do.

1368. Do you think it is an injurious regulation?—If it be so, as here stated, it might be a hardship.

1369. Might there not be many cases where a proprietor would like to have a small farm building which would cost, say 200 *l.*, but where he would not wish to build a house of the same value?—Certainly.

1370. Do you think there would be any objection to extending the time for the repayment of the money advanced for land improvement to such an extent that the instalment, including both interest and sinking fund, should not exceed 5 per cent.?—I think it would be very undesirable to alter the existing regulations.

1371. Why?—I think they are more likely to give satisfaction to the proprietors as they are, and they are extremely simple.

1372. Do not you think that more money would be taken for the purposes of land improvement if that alteration was made?—Possibly there might be.

1373. Would not that money be secured to the Government?—Yes, it would be equally secured.

1374. Is there not a great deal of land in Ireland which requires improvement?—A great deal, I believe.

1375. Then, if when the land is improved which requires improvement, the money advanced for that purpose is secured to the Government, and the people are employed by these means, would not that be a great national benefit?—It is, no doubt, very desirable to afford employment to the people and to improve the land.

1376. Without

1376. Without loss to the Government?—Yes, without loss to the Government.

1377. Mr. *Finlay.*] Do you know the total amount that has been borrowed for constructing farm buildings in Ireland?—The total amount sanctioned up to the end of 1863 was 95,000 *l.*

1378. Does not that seem to bear a small proportion to the amount borrowed for drainage?—I am not able to say what the ratio may be.

1379. I suppose you would consider that good and suitable farm buildings and a dwelling house was one of the first steps towards agricultural improvement?—It is considered so.

1380. Therefore, it is of great importance that every facility should be given to the construction of good farm buildings and dwellings?—Yes.

1381. Do you not think that the restrictions upon building farmhouses is likely to prevent money being borrowed, especially upon small farms?—I am not aware of the restrictions.

1382. I thought you were aware that there was a restriction, that no advance would be made for farm buildings upon which farm there was not a house?—I do not myself recollect that regulation.

1383. If there is such a regulation, would you think it injurious?—In some instances it might be, but I apprehend there are very few instances in which there is not a farmhouse of some description upon a farm.

1384. Suppose a person wishes to build an entirely new farm upon a small scale, would not that, in many cases, be a means of preventing its being done at all; if the proprietor had no money of his own to build a house, and could only expend 200 *l.* to build a farmstead, in that case he could only get an advance from the Government of 200 *l.* for a steading and house, which would cost together 400 *l.*?—That would be an impediment, no doubt, to the application for a loan.

1385. Would it not, in many cases, prevent the loan being applied for at all?—I apprehend it would not prevent it being applied for; looking at the proportion between the value of the farm and the premises which may be considered necessary for it, I take it that the amount of loan would suffice for all that was necessary for the farm, and ought not to be a difficulty.

1386. If there is no house, or a very insufficient house?—Then the amount of loan necessarily might be incommensurate with the value of that farm.

1387. Are not the great majority of farms in Ireland upon a small scale?—They are.

1388. The *O'Conor Don.*] At present there is a fixed limit to the amount which any proprietor can obtain for a thorough drainage, which limit is fixed quite irrespective of the value of the estate upon which the drainage is to take place, is that so?—The limit is fixed by Act of Parliament, irrespective of the estate, but the amount of loan sanctioned by the Board of Works has reference to the value of the estate.

1389. But in no case, under Act of Parliament, can a greater loan be had than a certain fixed amount, no matter how large the estate is?—That is so.

1390. Do you not think that the limit fixed by the Act of Parliament ought rather to have reference to the value of the property upon which this loan would be made, than upon a principle quite irrespective of that?—It would be an extremely difficult principle to lay down I think, the circumstances of estates vary so much.

1391. Do not you think it would be a very easy principle to lay down, to say that no estate could get a loan more than a certain proportion what the estate was considered worth under the Poor Law valuation?—Practically, within the limit of the total amount, that is the course pursued; the amount of the loan has reference to the value of the property.

1392. With this difference, that it cannot be greater than a certain sum?—Quite so.

1393. So that if an estate is worth 30,000 *l.* a year, the proprietor cannot get practically more than an estate that would be worth, say 5,000 *l.*?—Just so.

1394. Upon an estate worth 5,000 *l.* a year, it is not considered too much to give the entire amount of the loan, is it?—Certainly not; that has been done in several instances; the full amount of loan has been given.

1395. On an estate valued at 5,000 *l.*?—That would fully warrant the amount of the loan, if it was unincumbered.

1396. Then the practical working of the law is this, although at present you might under the regulation of the Board, grant a loan up to the full amount upon an estate worth 5,000 *l.* a year, you are debarred from granting any greater amount upon an estate that might be worth 30,000 *l.* a year?—Quite so.

1397. Would you not think it desirable that some alteration should be made in that?—It would appear desirable.

1398. Sir *Edward Grogan.*] Some questions were put to you about the erection of farmhouses and farm steadings, do you grant any advance whatever, or any assistance towards the erection of the farmhouse, the residence?—I think not; I know of no instance of any.

1399. You advance for farm buildings, stabling, cowhouses, and so on, but for the residence of the farmer, do you make any advance at all?—I remember no instance of any advance being made, and my impression is, that it is contrary to the regulations laid down.

1400. Have there been any applications to your Board for such advances?—I cannot say; I have not had charge personally of the land improvement department.

1401. The object being the improvement of the people of Ireland, does it appear to you that an advance made for the erection of farmhouses for the farmers to live in, according to the extent and value of the farm, would be a reasonable and proper expenditure in the country?—As far as I can see, it would be desirable to extend the loans for the purpose mentioned.

1402. And that this rule, which prohibits loans of that nature, should be reconsidered?—I think so.

1403. Lord *John Browne.*] Out of the 60,000 *l.* a-year which is given from the Treasury to you, you do not advance money for land improvement for thorough drainage?—No.

1404. You do not use the whole of that 60,000 *l.* a-year, do you?—We have not drawn any of it for several years.

1405. Is there any valid reason why you should not apply it to that purpose, if application was made to you for it; does the law prevent it, at present?—The law provides special funds for the purpose, and by inference we cannot apply the money voted for other purposes.

1406. Supposing that this special fund was

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exhausted, could you then apply a portion of this 60,000 *l.* a-year?—No.

1407. Why not?—Because that money is provided for other purposes.

1408. Is there anything in the Act which says that it shall not be applied to that particular purpose?—I do not remember that there is anything which says that it shall not be applied.

1409. It is given to you generally to make advances for public works, is it not?—Yes; for public works.

1410. And the nature of those works are, roads, and gaols, and lunatic asylums?—Not lunatic asylums, public works generally; but we have had no application for several years.

1411. Including arterial drainage?—Yes, including arterial drainage.

1412. What is the distinction; does the Act make any between arterial drainage and thorough drainage?—Yes, it does; special funds are provided under the Land Improvement Acts for the latter purpose.

1412*. Then would you see any objection to the law being altered, so that if you did not require this 60,000 *l.* for that purpose, it might be used for the purposes of land improvement?—I think it preferable that on the exhaustion of the funds now specially applicable to land improvement, which will be probably in about 12 months, further funds should be allocated to the same purpose under a renewal of the Act for encouraging land improvement. It is not improbable that the whole amount of the fund accruing from the annual advance of 60,000 *l.*, and other sources, may ultimately be required for the purposes of arterial drainage, together with other minor works.

1413. Mr. *Hankey.*] Do I understand that you have had no application for several years past for any advance of a loan out of the 60,000 *l.* a year?—We have had no application for advances out of that special fund; we have had application for two or three small sums from the general fund for the encouragement of public works.

1414. But is that 60,000 *l.* a year which is placed at the disposal of your Board, applicable only to a particular description of public work?—It is applicable to all public works, with the exception of land improvement.

1415. Sir *Edward Grogan.*] Is it applicable to fishery piers?—No, it is not.

1416. I believe applications for loans for harbours of refuge do not come under your Board?—They do not.

1417. Do you consider it is owing to any condition or requirement in connection with these Acts which prevents you having any application for them?—No, there are no conditions which should interfere with applications.

1418. What is the interest charged by the Board of Public Works upon loans for the general purposes of the Act?—Formerly the interest was 5 per cent.; latterly, in the few cases where loans have been made, it has been reduced to 4 per cent.

1419. Over what period of years does the repayment extend?—There is no specified number of years.

1420. Is it in the power of the Commissioners to fix the repayment at 50 years, if they chose?—No; where loans have been made, the Treasury have authorised the repayment being made in such number of years as they might think proper; in the case of loans made for public works, in counties, such as bridges, the repayment has usually been made in 12 half-yearly instalments.

1421. Then does every case stand upon its own merits?—It does.

1422. And there is no special rule, no particular general rule?—With regard to some works the period is provided by Act of Parliament, over which it shall not extend.

1423. But you have the power to lend it in any way, without application to the Treasury?—No, in no case can we lend without the sanction of the Treasury.

1424. Then you have no power, under any Acts, of lending money for public works without the consent of the Treasury to each separate transaction?—We have no power without the sanction of the Treasury.

1425. If you were not obliged to refer to the Treasury, but had the power at your discretion, do you think you could exercise it advantageously and more largely?—No, I do not think we could exercise it more advantageously than we do. We recommend to the Treasury, and they generally approve of our recommendation.

1426. Then practically there are no public works going on that require the advance of public money in Ireland?—No public works that come within that class which we are empowered to lend money upon.

1427. But the provisions of the Act of Parliament are very general, are they not?—They are very general.

1428. Lord *John Browne.*] As to the advances for altering or building gaols, out of what fund is that; out of the 60,000 *l.*?—No; we make no advances for building gaols.

1429. What Department of the Government does; does it come direct from the Treasury?—It is advanced out of the Consolidated Fund on the order of the Lord Lieutenant, on presentment being made by grand juries for repayment of advance.

1430. Mr. *Banks Stanhope.*] If you were to lend part of this 60,000 *l.* for the purposes of arterial drainage, under the Act of 1863, upon what terms would you lend it?—Upon the terms of its being repaid by instalments, extending over 22 years, at 6½ per cent.

1431. Sir *Edward Grogan.*] With regard to the erection of piers; supposing a new pier is proposed to be erected, what is the process now?—It depends on whether it is a pier for the encouragement of the fisheries or a pier for commercial purposes; if it is a pier for the encouragement of the fisheries, the persons who are interested in its erection apply to us for aid in erecting it. We hold an inquiry and send down an engineer for the purpose, who reports to us as to propriety for erecting the pier, and its probable cost; if upon full inquiry we think it is a desirable work, and will be advantageous to the fishery interests, we intimate to the persons interested that we shall be prepared to recommend to the Treasury a grant in aid not exceeding three-quarters of the amount, provided they raise, either from individuals or from the locality, the remaining quarter.

1432. Do you mean by the locality the barony in which the pier shall be situate, or the county itself?—It may be either, but generally it is from the barony, or that portion of the barony in the immediate vicinity of the pier.

1433. How is it with regard to a pier for commercial

mercial purposes?—We make no loans for piers for commercial purposes; persons who are interested in such apply to the Public Works Loan Commissioners.

1434. Have any complaints been made to your Board relative to the fishing piers in the county of Donegal?—There have been no complaints made to us, but we are aware that a great number of them have fallen into decay.

1435. A representation has been made to me by a gentleman in the county of Donegal, that the grand jury are extremely dissatisfied with the pier in that county, that it was unsufficiently constructed originally, and that, in fact, it must be rebuilt; is that within your knowledge?—I am not aware of the particular case alluded to, but there are a number of piers which were built a considerable number of years ago by the Board of Works; I cannot say whether they were well or ill built, but I presume they were well built, and they were handed over to the counties under an Act of some few years back, for maintenance.

1436. The one at Moville on Loch Foyle is the one I am referring to?—That pier in particular has never come under my notice.

1437. What provision exists for the keeping of these piers in a state of sufficient repair after they are built?—It is the duty of the counties to keep them in repair through the county surveyor; if it is reported that they are falling into decay or are in a bad state we have power to step in and have the necessary repairs made, and to charge the expenses to the county by a compulsory presentment.

1438. I will read you a passage from a paper—"The county surveyor at the recent assizes at Donegal reported that one of the largest piers, that at Moville on Loch Foyle was in such a state, owing to its not having been built on a proper foundation, that it must be taken down or rebuilt, or surmounted with some very expensive structure of wood or iron; do you know anything at all about that particular pier?—I do not.

1439. Would it be very difficult to make inquiries about that?—Not at all.

Jovis, 6° die Aprilis, 1865.

MEMBERS PRESENT:

Lord John Browne.	Mr. Hankey.
Colonel Dunne.	Sir Stafford Northcote.
Sir Edward Grogan.	Sir Robert Peel.

COLONEL DUNNE, IN THE CHAIR.

FRANCIS SEYMOUR LESLIE, Esq.; called in, and Examined.

F. S. Leslie, Esq.

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1440. *Chairman.*] You were examined last year, I think?—I was.

1441. You are one of the Officers of the Home Office?—Yes.

1442. Since you were here last, have you been looking at all at the difference in the advances made to Ireland and to England from the Consolidated Fund?—I am afraid I have not been paying much attention to the subject, not expecting to be examined.

1443. Can you state what are the different advances made out of the Consolidated Fund in England, that are not made in Ireland?—I am afraid I should not be able to give the Committee that information without time for preparation.

1444. You recollect the Return that was handed in last year; have you paid any attention to it since?—Nothing more than in the preparation of the Returns which are collected at the Home Office pursuant to the Act, and with reference to England only.

1445. Can you put in that Return?—That is the Return of last year; there has been a printed Return since; that Return has been lately issued to Members.

1446. Has it been delivered to the House?—Yes.

1447. Can you state what that Return is, and the date of it?—The number of it is 524, of the year 1864.

1448. Does that Return give all the information as to England and Ireland?—As to England only.

1449 Is there not one that gives the information for the whole of the United Kingdom?—No, this Return is collected under the 23 & 24 Vict. c. 51, and relates exclusively to England.

1450. Are you aware of the amount that is advanced out of the Consolidated Fund in England to the county courts?—I could not state the amount off hand.

1451. Will you look at that Return (*handing it to the Witness*); that is the Return I was alluding to; did that pass through your office?—No; this county court advance is entirely under the Treasury; the only Return relating to taxation in the Home Office is that under the Act 23 & 24 Vict.

1452. Sir *Stafford Northcote.*] You know nothing of the grants from the public funds?—Nothing whatever; that is the result of the Return of last year (*handing in a paper*).

1453. *Chairman.*] Is this the Return?—It is a summary of it.

1454. Has that been given in to the Committee?—I am not aware that it has.

1455. Will you state what the headings there are for local taxation; there is "church rates;" do you put that in as local taxation?—Yes, church rates are specially named in the Schedule of the Act.

1456. And "sewers rate?"—Yes, and sewers rate also.

1457. Is not that confined mainly to towns?—There are commissions of sewers in various parts of the country which levy rates.

1458. Do you mean in the country apart from villages or towns?—Yes, these commissions have nothing to do with the sewerage of towns. There are also drainage commissions.

1459. Lord *John Browne.*] But they are not in all parts of the country, are they; only in particular places?—In particular places.

1460. Not generally throughout the country?—No, but they extend into many counties.

1461. Sir *Robert Peel.*] Are there any in the agricultural counties?—Yes, in Lincolnshire, Cambridge, Norfolk, Suffolk, Kent, Sussex, and other counties.

1462. *Chairman.*] Do you include as sewers what is here put under the head of embankments or drainages?—No; they are quite different. There are sewers commissions, of which the Committee will find a list in the Return. These commissions are issued by the Lord Chancellor, and are of very ancient origin.

1463. Then, the Embankment and Drainage Commissions are different?—Yes; they are under local Acts.

1464. As to the improvement rates, are they confined to towns?—They are chiefly confined to towns and districts adjoining towns. There are, I think, some cases of improvement Acts for rural districts.

1465. The local management of the metropolis and main drainage are, of course, confined to London?—Yes, within the limits defined in the Metropolis Local Management Act.

1466. Then, there is "markets and fairs;" what are they?—Tolls collected under Acts of Parliament, or from ancient custom.

1467. Does that include the customs in the hands of private individuals, of which there are a great many by charter?—No; tolls or dues taken by prescription or otherwise, as private property, exempted under a clause of the Local Taxation Act.

1468. Exempted from what?—From being returned.

turned. The Act does not extend to such tolls or dues.

1469. Sir *Edward Grogan.*] Then, what are the tolls included in the Return?—With regard to markets, where they are levied by authority of Parliament.

1470. *Chairman.*] Then, the "bridges and ferries," are they only those that belong to public corporations, or does it include those belonging to private individuals?—All private individuals may claim exemption from the Act, but application was made with respect to all bridges where tolls are collected, and, in some cases, private parties have returned their income from them; others have objected.

1471. Then "harbours;" does this include the dues in harbours upon anchorage, and so on?—Yes.

1472. What are the charges under that head?—Anchorage.

1473. Wharfage?—Yes, everything of the kind; tonnage and ballast dues, lighting and pilotage dues, &c.

1474. Sir *Edward Grogan.*] Every accommodation afforded by the harbour?—Yes.

1475. *Chairman.*] Does it include private accommodation, or only public?—Public accommodation is all that can be asked for under the Act; private property is exempted from being returned.

1476. And it amounts to 1,047,745 *l.*?—Yes, it is so shown in the Returns for 1863.

1477. Sir *Edward Grogan.*] Have these piers and harbours that you speak of been erected by means of private funds altogether?—I can hardly answer that question otherwise than by referring to the terms of the Act.

1478. *Chairman.*] Are they things that have been done by the public, or by private persons?—With regard to harbours, it applies to all the harbours in the country, whether they are formed from public or from private funds, where tolls or dues are levied under authority of Parliament for purposes of local improvement.

1479. How could the public charge them if they were done by private funds; they would be private speculations, would they not?—Yes; if private speculations, they would be exempt from returning their profits; possibly funds might be raised by subscription and the profits applied to the improvement of the place.

1480. Can you look into that matter and state what the harbours are, and whether they have been done by private means or from the public monies?—Yes, I can do so. Perhaps the following explanation may be permitted, in answer to this and the three preceding questions. The Local Taxation Returns Act applies to all rates, taxes, tolls, or dues levied for purposes of local government or improvements; and tolls or dues, levied under the authority of Parliament in respect of harbours, are mentioned in the Schedule of the Act. The harbours for which returns are made are under the management of corporate bodies, boards, or commissioners, authorised by local Acts of Parliament to levy tolls, dues, &c., for the maintenance of the harbours.

1481. I see, under the head of "Burial Boards," there is a blank; that is a rate that has never been levied, with a debt of upwards of 1,000,000 *l.*?—Yes, the debt is shown in the Returns to amount to upwards of that sum.

1482. That is a private speculation, is it not?—No, it is not private; burial boards formed under the Burial Acts are empowered, with the sanction of the vestry and the approval of Her Majesty's Treasury, to borrow money for the purposes of the Acts, and to charge the payment of principal and interest upon the poor-rate. In certain cases a special burial rate may be levied.

1483. The rate is left a blank here, but the debt is stated?—Yes, the debt is stated. The omission of the rate in the statement of figures from which the Chairman is reading is explained in the memorandum which precedes the statement,

1484. Is the reason of the omission of the rate because it is charged in the poor-rate?—That is the explanation.

1485. In the preceding year we have got the amount of the rate levied, 98,405 *l.*?—Yes.

1486. But in this year they have not levied any rate; is that so?—In each of the preceding years we have a sum named; in the first year there was 103,706 *l.* of rate levied or received out of the poor-rate.

1487. But this year there was not any?—The amount for this year is shown in the Returns; viz., 110,126 *l.*, but was omitted from the abstract statement for the reason above given, the amount received from the poor-rate and the amount levied as special burial-rate not being distinguished.

1488. What are the burial boards; how are they formed, and what money are they supplied with; are they private speculations, or public bodies?—Burial boards are appointed by parish vestries under Acts of Parliament. The 15 & 16 Vict. c. 85, is the Act relating to the metropolis; the 16 & 17 Vict. c. 134, to places beyond the metropolis.

1489. By whom is the expenditure of the burial boards supplied?—I think their funds, for the purchase and formation of grounds and the building of chapels, &c., are borrowed, and then are chargeable on the rate.

1490. Do they borrow from the public, or from private individuals?—From the Public Works Loan Commissioners, with the sanction of the Treasury.

1491. Sir *Edward Grogan.*] Are they subordinate or supplementary bodies to the administration of the Poor Law?—No; they are entirely distinct from it: they are formed under special Burial Acts; first, there was the Metropolis Burial Act, and then the Burial Act relating to country places, amended and extended by subsequent Acts. The town council in boroughs, local boards, and improvement commissioners, may be constituted burial boards.

1492. They are quite distinct also from the large burial societies, such as Kensal-green?—Entirely so.

1493. *Chairman*] Then as to these "local boards," which is the next item; what are they?—They are boards under the Local Government Acts.

1494. In towns chiefly?—In towns and in country districts also.

1495. And for what purpose?—For the purposes of local government; the management of the districts and sanitary improvements.

1496. Is there any agricultural county where there are these local boards?—The terms of the Act are "Towns and Populous Districts," which may be brought under the management of local boards.

1497. The whole of this raises a rate of 3,542,299*l.*; there is a debt of 12,271,052 *l.* upon that; to whom is that debt owed?—That debt

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is partly owing to the Government, partly to private parties.

1498. Then there is an additional debt of 4,659,914 *l.*; is that of turnpike road debt, bonded debt?—That is bonded debt upon turnpike tolls.

1499. That is still due; to whom is that due?—That is due chiefly to private parties, but secured upon the tolls: there is some amount owing to the Government.

1500. So that of all those rates there would be 16,000,000 *l.* or 17,000,000 *l.* of debt now?—Yes; that is about the amount shown in the Returns.

1501. There is to be added to these rates taxes, tolls and dues; the poor-rate, that is a local tax?—Yes; it is levied by local authorities and for local purposes.

1502. Amounting to 9,174,976 *l.*?—Yes, that is the amount shown in the Poor Law Returns for 1863, including county and police rates.

1503. And the Metropolitan Police rate?—Yes, which is a distinct rate, affecting the Metropolitan Police district.

1504. And the City of London Police rate?—Yes; affecting the City of London.

1505. The borough rate and the highway rate; is that highway rate a rate extending over the country or merely confined to the environs of London?—Generally over the whole country.

1506. That is, the whole of the roads of England, is it?—All highways, distinct from the turnpike roads, and contributing in some cases to to the latter.

1507. There is a turnpike toll amounting to about 1,000,000 *l.*, I believe?—Yes, the amount shown in the annual statements for 1861 was 1,066,156 *l.*

1508. Sir *Edward Grogan.*] The turnpike toll and the highway rate include all kinds of roads in England, private roads and others, do they not?—All public roads.

1509. Public roads and parish roads?—Yes, all roads maintained by turnpike tolls and highway rates.

1510. Every road except mere private bye-roads?—There may be some roads, but not to any considerable extent, open to the public, maintained, *ratione tenuræ*, by the holders of the property through which they pass, the cost of which is not shown in the Highway Returns.

1511. *Chairman.*] Then there is the "Trinity House;" are they tolls levied, or how do they come into account here?—Being levied from shipping.

1512. Tolls on shipping?—Yes, for pilotage and light dues.

1513. That amounts to 13,103,826 *l.*?—Yes, that is the total amount of rates, tolls, dues, &c. shown in the Returns.

1514. Sir *Edward Grogan.*] Is that for the use of the lights?—Yes; for the use of the lights. The amount stated, under Trinity House, is 374,115 *l.*

1515. And harbour dues?—Not harbour dues; those are shown in the Harbour Returns, as before stated.

1516. *Chairman.*] Then there is 3,000,000 *l.*, as stated above, making in the whole 16,647,337 *l.* of local rates, upon which there remains a debt of from 16,000,000 *l.* to 17,000,000 *l.*; is not that the case?—That is the result shown in the Return under consideration.

1517. Is there any account of the valuation of the land upon which these rates are levied, in any return that you are aware of?—The Poor Law Returns would show that.

1518. Would the Poor Law Returns give the valuation?—I think so; it would give the Poor Law valuation, upon which the poor-rate is levied.

1519. It is not a uniform valuation throughout the country, is it?—I think there is a general Poor Law valuation, which will show the valuation upon which the rate is levied.

Jovis, 27° die Aprilis 1865.

MEMBERS PRESENT:

Lord John Browne.
Colonel Dunne.
The O'Conor Don.
Mr. Finlay.
Mr. Hankey.
Sir Frederick Heygate.
Mr. Howes.
Sir Robert Peel.
Mr. Longfield.
Mr. Lowe.
Sir Stafford Northcote.

COLONEL DUNNE, IN THE CHAIR.

HENRY WILLIAMS CHISHOLM, Esq., re-called; and further Examined.

H. W. Chisholm, Esq.

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1520. Sir *Stafford Northcote.*] HAVE you been good enough to turn your attention to the question of the local taxation of Great Britain and Ireland respectively?—I am now preparing an account of the local taxation of England and Wales, Scotland and Ireland respectively, in the years 1801, 1817, 1845 and 1864, so far as it can be ascertained, which I shall be prepared to present to the Committee.

1521. Will you also be able to show what amount of aid was granted to those countries respectively in those years from the Imperial Exchequer?—I have a similar account of the grants in aid of local taxation for the same years.

1522. With regard to the relative ability of the two countries, have you any information that you can lay before the Committee tending to show the relative ability of the countries to their taxation in those years?—I have also a statement with regard to the respective ability of each country to contribute to the Imperial expenditure in those years, so far as I can ascertain it from any information which appears now to exist; and I propose also, with these accounts, to lay before the Committee a statement of any information which may appear to elucidate and explain the subject.

1523. Will you be able to lay those papers before the Committee in a printed form, without delay?—I shall hope to be able to do so.

1524. Sir *Frederick Heygate.*] From what sources have you been able to ascertain this account of the local taxation?—Entirely from information that has already been presented to Parliament.

1525. Then is it the fact, that, with regard to the local taxation of Ireland, an account of that is presented to Ireland every year?—With regard to the local taxation of Ireland, there is not the same information that there is with regard to England and Wales, but there are returns of certain heads of local taxation in Ireland which are presented periodically to Parliament.

1526. Does that include all the great heads of expenditure of local taxation?—I think nearly the whole.

1527. Such as county rates, and things of that kind?—All the expenditure through the county treasurers is included in these returns.

1528. Would the poor rates be included in them?—The receipts and expenditure of poor rates are included in different annual returns, presented by the Poor Law Board.

1529. And in this compression, which you will lay before the Committee, that will be included as well as the amount of the poor rate, will it?—Certainly it will.

1530. Lord *John Browne.*] What do you include in local taxation; do you include turnpike tolls?—Yes, I shall include them in the statement I shall present to the Committee; I shall state the different heads which are included in local taxation, and the reasons for including them. In a Report of the Poor Law Commissioners on local taxation, drawn up and presented to Parliament in 1843, there is a statement of the different heads of local taxation, and the reasons for including and excluding certain heads of account, to which reference will be made in the statement which I shall bring before the Committee.

1531. Do you include amongst the local taxation of Ireland the expense of maintaining County Courts, which is maintained out of the public funds in England, and out of fees and presentments in Ireland?—I can hardly answer that question without having the accounts before me.

1532. Mr. *Longfield.*] You know nothing personally of anything connected with the local taxation of Ireland, do you?—I do not.

1533. For instance, taking any barony, in Cork, or in King's County, you could not tell within half-a-crown in the pound what you would be likely to pay if you were going in as a tenant?—No, I have no information at all on the subject of the local taxation of Ireland, except what I have collected from Parliamentary Papers.

1534. In England, however, if you were taking a farm in Devonshire, you would have a pretty good notion of the local burdens, would you not?—I have no such information at the present time.

1535. Is there any county in England where you are aware what the local burdens are?—I have only information of such burdens as I have myself to bear.

1536. As a resident in the country?—As a resident in London.

1537. Then in truth you have no information whatever as to local taxation, save as a public officer?—That is all.

1538. You have no practical knowledge of the amount of it, or the nature of it, in any one of the three portions of the United Kingdom?—None whatever.

1539. Can you now enumerate some heads of the Irish local taxation; for instance, what are the local taxes of the county of Cork; can you

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tell the difference between the nature of the local taxation of Cork and King's County?—Certainly not.

1540. Nor whether they vary at all?—Certainly not.

1541. Nor in England; can you tell the difference of local taxation between Northumberland and Cornwall?—No, I cannot.

1542. Mr. *Howes.*] Is the information you will give the Committee entirely derived from Parliamentary documents?—Entirely so, as regards local taxation.

1543. *Chairman.*] Have you turned your attention to the valuation of the two countries, both for local and Imperial purposes?—I am endeavouring to get some information upon that subject to lay before the Committee.

1544. But you will lay nothing before the Committee that does not come from Parliamentary sources?—Either from Parliamentary or official sources.

1545. Will you be able to give the Committee any account of the difference between the valuation and the real value, or is there any Parliamentary paper that will lead you to that?—At the present moment my impression is that there is not; but I will endeavour to ascertain.

WILLIAM ANDREWS, Esq., called in; and Examined.

W. Andrews, Esq.

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1551. Do you think the fisheries of Ireland now are in a satisfactory state?—By no means; they are very far from that. I should wish to mention, that with regard to the question that was just put to me, that there was also relief given to the poor for the manufacture of frieze, linsey-woolsey, and other coarse articles used by the peasantry; but the whole money was chiefly applied for the distressed fishermen on the coast of Ireland.

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their effect on the increase of the fisheries in other parts, and upon the well-being of the people engaged in them?—First, with regard to Dingle; on my first visit to Dingle there was a large body of fishermen there, and the greatest state of destitution; they had only small sprit boats and canoes, and, of course, they were obliged, in such boats, to fish within the precincts of the bay; we had the means there, through a chartered company which worked most successfully, of providing those men with large boats, and I believe I was the first to take them out of sight of land. From that time they had such an interest in the fisheries that the men are working with very large boats; they have become admirable seamen and good pilots; they go anywhere along the coast, and have been, I believe, of very great benefit to the country. I believe more men for the Naval Reserve have been supplied from Dingle than from any other part of the coast; during last September 80 able-bodied young men served on board Her Majesty's training ship "Hawk," for the Naval Reserve, and all those men would work still there if provided with good boats, and would never wish to leave the country.

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1563. Do you know the take of herrings last year, during two or three months?—I know it was enormous, but still, great as it was, the demand for fresh fish in the English market was equal to the supply; and, except on two or three occasions, when there was a very large take, those fish were generally all bought by English and Scotch buyers.

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1566. *Chairman.*] The whole of the fish caught at present are sold as fresh fish, are they not?—Nearly all; of course some are cured.

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1569. Is that imported?—All the ling and cod are imported.

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1572. Then the only impediment is the want of boats?—Yes.

1573. And that is caused by want of capital, is it not?—Yes; I could name stations such as Killybegs, and Killalla, and Donegal Bay, which would supply any quantity of fish, and even at the time when they had only small shore boats, when the weather permitted, the take used to be enormous. In Galway Bay the fisheries are most extensive, because the people there all fish on that part of the coast, and are able to take the herrings within the headlands.

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tell the difference between the nature of the local taxation of Cork and King's County?—Certainly not.

1540. Nor whether they vary at all?—Certainly not.

1541. Nor in England; can you tell the difference of local taxation between Northumberland and Cornwall?—No, I cannot.

1542. Mr. *Howes.*] Is the information you will give the Committee entirely derived from Parliamentary documents?—Entirely so, as regards local taxation.

1543. *Chairman.*] Have you turned your attention to the valuation of the two countries, both for local and Imperial purposes?—I am endeavouring to get some information upon that subject to lay before the Committee.

1544. But you will lay nothing before the Committee that does not come from Parliamentary sources?—Either from Parliamentary or official sources.

1545. Will you be able to give the Committee any account of the difference between the valuation and the real value, or is there any Parliamentary paper that will lead you to that?—At the present moment my impression is that there is not; but I will endeavour to ascertain.

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1635. Do you think it would be politically of advantage to the country to induce these fishermen to remain in the country; if they had the means of living there, do you think it would stop the emigration?—I am very well aware that a great number of the fishermen round the coast of Ireland would remain in the country if they were employed, and that a great many at Dingle would remain at Dingle if they had larger boats; but I am afraid that when anything settles in America to give them encouragement to go out, they would all leave; and this is another evil, that you have been training a number of men to the use of guns and ships, and you let them go to America, and there are scarcely any who do go to America but entertain a deeply hostile feeling towards this country, thinking that they have been forced from Ireland by the neglect of England; at least that is the impression they have.

1636. Do you think that they would be retained in this country by the measures you suggest, and that that would stop this emigration?—I do think so, to a great extent.

1637. What is the annual sum that you advance for boats out of your fund?—I think about 2,500 *l.* a year; we have advanced from time to time in the last few years over 15,000 *l.*

1638. Upon an average annually?—In some years it has been more than in others; this last year it was upwards of 2,000 *l.*, I daresay.

1639. Can you form any idea how much it would be, if the fund were augmented, that would be lent out in this way?—It depends entirely upon the recommendation of approved persons as security for the fishermen, the applications are immense.

1640. Far more than you can supply?—Far more than we do supply, because many apply that have not proper security to give.

1641. Are there applicants whom you are obliged to refuse from want of funds who have ample security?—No, I do not think there are.

1642. Then could that be extended?—If a fund was available under any Government arrangement, and placed at the disposal of any board or direction, I am certain it would be largely taken advantage of by the fishermen on the coast, because in several reports the Commissioners of Fisheries, who acted from 1819 to 1830, stated that the applications were most numerous, and that the loan fund that was established had been most beneficial; they lent out upwards of 15,000 *l.* themselves to fishermen for the repair and building of boats.

1643. If that 5,000 *l.* had been granted every year, do you think that it could, with safety to the security of repayment, be advanced?—Decidedly, and I can quote many instances of other funds where monies have been lent to be repaid by instalments that have been punctually repaid with very few losses.

1644. Are you referring to instances connected with the fisheries or other objects?—Other objects. A general loan fund was established in Cork for the relief of the poor, and was productive of much good.

1645. And no loss upon it?—None, or scarcely any. We have had no loss whatever in the last ten years, not a fraction, and not only have we not lost, but there has very seldom been any difficulty in the repayment of the periodical instalments.

1646. If this 5,000 *l.* a year was paid, and if the Government gave any similar assistance to the people, do you anticipate lending it out in the same way that you yourself have done?—The manner in which the loans are given is free of interest, and they are repaid by instalments; but the general loan fund, established under the Fishery Commissioners, charged 5 per cent.; but on the building of a boat no charge was made until the boat was completed, and they granted one-fourth of the money for the price of the boat, the fishermen finding the remaining three-fourths, so that it comes to much the same thing.

1647. Were not those grants more advantageous to the fishermen and more liberal even than those you made?—It would amount to something about the same with the interest; it certainly was more liberal, because they allowed one-fourth of the price of the boat, charging 5 per cent. interest, the period of the loan being more limited.

1648. Still, you, who are obliged to be more strict, have not lost anything?—Nothing whatever in the last 10 years, as far as I have gone through the accounts.

1649. Can you put in before the Committee the forms and the statements you have referred to?—I have drawn out a condensed form of the sums of money paid to Ireland under the different Acts, and the sums paid to Scotland. I can hand those in; perhaps they will give a more general view, and in a more condensed manner, of the nature of the statements I have made.

1650. Sir *Frederick Heygate.*] I think you stated that you were of opinion that the falling off in the Irish fisheries was owing to the want of boats?—Yes, and the want of means.

1651. Do you think that is the chief reason?—It is at present, on the coast of Ireland.

1652. Do you consider that the Irish as a people are fond of maritime pursuits?—Decidedly, and if you refer to any of the coastguard officers on the south-west coast, they will tell you that there are not finer or abler seamen than they are, and they are most experienced fishermen when they have been trained in the large boats.

1653. Is it not a fact that they go into the mercantile navy to a less extent than almost any other people?—That may be from their want of knowledge of seamanship; because, if they have only been in small boats, yawls, and canoes, they are not fit for the merchant service or for the navy. It is by improving their condition in this respect that they will be made fit for the merchant service and the navy. You should give them good boats, and that would give them determination to keep out in bad weather, and to keep out from the land, which they are quite equal to, for the canoes go out in heavy seas in the Atlantic.

1654. Have you had many applications for advances in aid of boats?—We have had a good many, but we only give them money upon the recommendation of approved securities, and people do not like the trouble and responsibility of looking after the money.

1655. Speaking from memory, have you ever had any applications from Loch Foyle?—I do not think there have been any applications from Loch Foyle: they have been chiefly on the east coast, a good deal on the south coast, and on the west coast. I do not think there have been any on the north or north-east coast.

1656. Do you know anything about the comparative number of boats belonging to the different parts of the country?—Yes; I know them all.

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1657. Are you aware that fishing-boats in the neighbourhood of Loch Foyle and on the north-west coast have very much diminished?—I think there are boats of not more than about 25 or 30 tons on Loch Foyle, and some 10 or 15.

1658. Were they not much larger and fewer of them some years ago?—I have not any of the returns from that part to enable me to say how the boats are fitted out or employed there now.

1659. Are you aware, which I believe is a fact, that although the demand for fresh fish has increased in an extraordinary degree on the west coast of Ireland, the number of fishing-boats has been reduced year by year, and the number of persons employed in them to the same extent?—The cause of that may be the want of capital, the means of fitting out the boats; in many of our best places on the west coast the means have diminished every year.

1660. Still, if the employment is of a very remunerative kind, which is now the fact, it is hardly likely that capital will not come forward, is it?—I suppose no part of the west coast of Ireland more generally practised fishery than Galway, yet the men are not able to fit out the boats there, and they complain of the high rate of the railway charges; in fact, they have not the means.

1661. Are you aware of the fact that fish, turbot for instance, from Loch Foyle, which 10 years ago sold at half-a-crown a-piece, are now worth from 14 *s.* to 15 *s.*; and that, in spite of that immense advance, there are fewer persons employed in the trade, and fewer boats go out fishing than before?—No; I do not know anything about the north-west coast, it is not a part of the coast that I am in the habit of visiting.

1662. *Chairman.*] Would you not regard that as a proof of the increased poverty of the people?—I think the decrease is owing to the poverty of the people.

1663. Sir *Frederick Heygate.*] I do not put it with that view, I put it to show that they are not at all prepared to go out to sea; are you of that opinion?—Not at all; I think the Irish fishermen are just as good as any others.

1664. But you have no personal knowledge of that part of the country?—No.

1665. Lord *John Browne.*] What is the name of your society?—We are trustees for bettering the condition of the poor of Ireland.

1666. And your operations are chiefly limited to assisting the fishermen?—We provide them with boats, gear, nets, and other means for the fisheries.

1667. By the Act of 1819, what conditions were enforced when grants were made out of that 5,000*l.*?—The conditions of that 5,000*l.* a year, under 59 Geo. 3, were particularly with regard to an improvement of the fisheries. There were several Acts all combined together, one of which gave 3 *l.* a ton upon the deep sea herring fishery; but that was employed generally, not as a bounty exactly; it was given as assistance to poor fishermen, and for harbours, piers, and improvement of the boats.

1668. And curing-stations?—For the purposes of the fisheries.

1669. Can you tell the Committee what was the date of the last application for a grant under that Act; the one that was refused, as you say?—The applications are made to the Board of Public Works, so that I cannot tell the nature of them.

1670. You stated that one was refused, I think, because there were no funds; when was that?—The date of this Return is the 21st of July 1864. This gives a review of the fisheries under 59 Geo. 3, and all the subsequent Acts, and the manner in which the money has been disbursed by the different Boards; and then it states that since 1830, when the 5,000 *l.* a year was discontinued to Ireland, "numerous applications have been made for pecuniary aid for various purposes in cases of extreme distress amongst the poor fishermen; but the answer has invariably and necessarily been, no funds available."

1671. Are you aware whether applications had been made for building piers for curing-stations in Ireland out of that fund?—I know nothing of the applications made to the Board of Public Works; I am only acquainted with what is quoted in this return. I do not know what the nature of the applications has been at all.

1672. You are aware of the sum of 5,000 *l.* having been allocated from the Irish Reproductive Loan Fund, and placed in the hands of the Board of Works, are you not?—That is a distinct sum altogether; that was at a period of great distress, in 1846; through Sir Charles Trevelyan a sum of 5,000 *l.* was granted out of the Reproductive Loan Fund for the establishment of curing-houses on the coast of Ireland.

1673. Are you aware that a portion of that fund is still unexpended?—£.876 is still unexpended.

1674. Will you just take this Return in your hand, I think you will see that it is something more?—£.5,000 was the sum granted; 876 *l.* 1 *s.* 1 *d.* was the sum repaid into the Exchequer as unappropriated, and then is shown the loss sustained by the stations.

1675. Are you aware that any applications have ever been made to the Board of Works for grants out of the sum still remaining?—This return shows that applications have been made for any funds available, and the answer has been, none are available.

1676. Are you aware whether when such applications were made and refused the attention of the Board of Works was called to funds existing, out of which they might have granted those applications?—No, I can say nothing about that.

1677. In fact, you know nothing except from that Return?—No.

1678. You have mentioned the Bay of Galway; there is a very large quantity of fish there, is there not?—Immense.

1679. Have applications been made to your society on behalf of the Claddagh men for boats?—An application was made to me by one of the priests of Galway recently; he was most anxious to get money for the Claddagh people, but on seeing the form of application which was necessary, and that securities were required for every man, and that respectable shopkeepers would do or one of the gentry, he said he could not get a man who could obtain the security necessary. It is not that the men are not industrious, or that they are not equal to it, because we have returns showing that when a loan fund existed in Galway, and monies had been lent to the Claddagh men, they had invariably and honestly repaid their instalments.

1680. What sort of boats have the Claddagh men at present?—Small hookers from 7 to 9, 10 or 12 tons, small open hookers, some without any forecastle at all covered; very small bad boats, not

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fit for the Bay of Galway, only fit for off-shore winds and fine weather.

1681. Do you think that they attend to their fishery as much as they can with the boats they have? — Certainly not; for instance, this last Lent and for several previous Lents, when they ought to have derived great profit from the sale of fish, all their boats were employed in cutting and selling seaweed; they did not go into the fisheries as they ought to have done, although there are very good seamen and very good fishermen amongst them.

1682. Is not the reason of that that they make more money by cutting seaweed than they do by selling fish?—No; the facts are they have their boats and they fit them out for cutting seaweed because they have not the means for fitting them out with gear, nets and things necessary for fishing.

1683. Have you never heard it said that the fish have left the west coast of Ireland to a great extent?—No.

1684. Have you never heard that said?—It may have been said, but it is not the truth, for they are as abundant there as ever, but the people have not the boats to get them.

1685. Are you aware that several companies have existed at different times for the purpose of extending the fisheries there?—Yes.

1686. Captain Simon's Company, for instance? —Yes.

1687. That company failed, did it not?—Yes, with very great loss, but it was conducted upon a very extravagant and foolish system. They had no man of experience on the direction who knew the seasons and the fishing-grounds of the coast.

1688. Have there not been similar companies established at various times which have failed in like manner?—There have been similar companies; there was a company under the Limited Liability Act in Galway; that also failed, but they went to work in the same extravagant, foolish way; the directors knew nothing about the fisheries.

1689. Do you know anything about the oyster fisheries?—They are very extensive indeed in Ireland, and they have been largely supplying the English and French markets, as well as the Welsh.

1690. Have you seen the Reports of the Irish Fishery Commissioners, stating that the oyster fisheries in Ireland have very much fallen off?—They have in different places fallen off very much, but it is entirely owing to the over-fishing, and to the manner in which boats have been allowed to dredge; but the Commissioners of Fisheries, I believe, have now taken very prudent steps to put a stop to this, and to make close seasons; for instance, in Tralee Bay they have established a close season, and on the east coast of Ireland, from Arklow to Wexford, they have limited the extent of dredging that used to be carried on during May and June to supply the fisheries of other places, such as the Welsh, English and French coasts.

1691. Are you aware that oysters have increased at least 50 per cent. in price during the last few years?—That is entirely attributable to the beds not being kept up and properly protected.

1692. Is it not the case that the management of an oyster bed gives a vast amount of employment?—I do not know that it does; of course, a great number of boats dredging would give employment to a certain extent, but the mere management of an oyster bed does not give any vast amount of employment.

1693. Have you read the pamphlet that has been prepared by Mr. Barry, the Commissioner of Fisheries?—Yes, I have seen it; it is a very useful compilation, and gives the state of the oyster fisheries in different countries.

1694. Did not you observe there that a great amount of employment is given in the cultivation of an oyster bed?—I do not know that a great amount could be given, because I do not think the returns would warrant very great or extensive employment.

1695. Do you believe that there might be a very great extension of the cultivation of oysters in Ireland?—I do; and if the system pointed out by Mr. Barry for the protection of the beds and for private beds being laid down was followed, the oyster fisheries of Ireland might be carried on to an immense extent.

1696. Do you believe, that if there was more capital, there would be a greater extension of the cultivation of oysters?—Decidedly; but I do not know whether it would be proper to employ any other than private capital for that purpose; it is not like the encouragement of the deep sea fisheries.

1697. Any facilities for giving licenses for planting oysters would greatly promote it, would it not?—Decidedly; and I believe the Commissioners are prepared to give licenses whenever application is made to them for that purpose.

1698. Are you aware that a great many of the old public beds have been thoroughly exhausted?—Decidedly they have; for instance, the bed of Carlingford and some on the west coast. To bring the oysters to perfection, they require at least five years' growth: in many places on the coast of Ireland, such as Howth and Malahide, they lay them down every season; if a proper system of protection was established I am quite sure that there would be an immense extension of the oyster fisheries.

1699. Is there not a difficulty in getting a license where any public oyster bed has previously existed?—Decidedly, because the public will at once step in and prevent any private arrangement being carried out there.

1700. And the ground having been thoroughly exhausted is now of no use to the public?—No.

1701. Unless a license is given for that ground, will it ever be of use to the public again?—No, it might be left there untouched, and the oysters might accumulate again upon any breeding-ground. There is a great difficulty about the granting of these licenses; there has been great neglect of the oyster fisheries by the proprietors; and now they are becoming valuable, whenever they step in to claim the right of having an oyster fishery, the fishermen at once say, "That is public ground; we have dredged upon it, and it is a public right," and they will not allow a private fishery to be established, although it might form a valuable oyster fishery.

1702. Do you believe there is any branch of the sea fishery in Ireland upon which so large an amount of employment and of profit could be derived as from the formation of new oyster beds?—I think the herring fishery and the ling and cod fishery would be far more extensive and give greater employment, and not only so, but be more valuable in every way as forming men both for the merchant service and the navy, and at the same time when there are such large imports

imports made to Ireland now, and when there is such a dearth, for I may say that, in the last 20 years, every town in Ireland during Lent has been supplied by imported fish, Scotch barrelled herrings, Newfoundland cod and Norway herrings, while there is such an immense quantity of fish round the coast of Ireland, that would be the best system of improving the fisheries. The oyster fishery is merely a shore dredging, and landsmen are to some extent sufficient for that.

1703. Mr. *Longfield.*] Can you give the Committee a list of the places on the coast of Ireland, where the sea fisheries have been improved in the last half-dozen years?—There are very few such places on the coast of Ireland, from the want of capital and boats; but at Dingle the people have been largely employed, and so far as boats could be given to them they have realised great profit; in fact many who started with no capital, by the assistance of the trustees, have now large boats, and money in bank.

1704. You have assisted them extensively?—Yes; at Kinsale there are a number of fine boats, and the fisheries have decidedly improved there.

1705. Were there not fisheries at Kinsale some years ago, much more numerous and healthy?—I do not think they were; they might have been so when encouragement was given to the fisheries, but I think at present the Kinsale fishery is going ahead rapidly. There is a Mr. Dawson there who has given great encouragement to the fishermen, and a number of Manx fishermen visit the coast.

1706. Did you not see it stated that the other day in the paper that the Manx boats were double as good?—They may be in this respect, that the Manx boats are larger, fitted up with deeper and more extensive nets.

1707. Have your society given anything to the people at Kinsale?—On the south coast.

1708. How many boats or hookers have been built at Kinsale by the assistance of your society?—I do not think there have been any at Kinsale; but the men have been assisted on the south coast, at Youghal.

1709. What sum do you think has been given?—I think about 1,000 *l.*, and at Dingle more than that; but on the east coast very large sums have been given.

1710. Has the improvement in those two places you have named been promoted a great deal by the advances made by your society?—More so on the east coast.

1711. But I am asking about those two places Dingle and Kinsale?—Yes.

1712. And no doubt the improvement of the fisheries is to be attributed to the assistance given there?—Decidedly, at Dingle.

1713. Do you know anything about Howth and Malahide, and the improvement of the fisheries there?—Yes.

1714. Can you tell whether the fisheries have improved there in the last few years?—They are largely improving, at Howth particularly.

1715. Did your society give any assistance to the people of Howth?—They have given very large assistance to the people at Howth.

1716. Is it a fact that the fishery has greatly improved within the last few years?—Decidedly, very largely improved, so much so that the Skerries boats, seeing the improvements of the fisheries there, have applied for moneys for the Skerries people, and they are turning it to the herring fishery this year.

1717. Is it not a fact that the general improvement in that local fishery has been promoted and caused by the advances made by your benevolent society?—Decidedly, by the loans and advances made, to enable the fishermen to have large boats, superior deck boats, and superior trains of nets.

1718. And has that been productive of great public as well as local good?—Both.

1719. Do you know anything about Malahide?—There are boats there, but the boats chiefly go to Howth. Malahide is a tidal harbour.

1720. Have your society assisted there?—There are some few that have been assisted at Malahide.

1721. Do you know anything of Arklow?—At Delgany and Greystones large amounts have been lent to the people.

1722. Are those fisheries also improved?—They are decidedly.

1723. I think those fisheries are peculiarly situated with regard to the local markets, are they not?—They are.

1724. Do you attribute any great improvement to the markets being nearer or better?—The number of boats now engaged there find it advantageous to carry out the fisheries extensively in consequence of the great demand for fresh fish by English buyers; and if the boats were twice the number they could sell all the fresh fish at home.

1725. But that peculiarity as to the local markets does not happen to apply to Dingle?—No, still they send up a great quantity of fresh fish from Dingle to the Dublin market.

1726. By reason of the facility of the railway? Yes.

1727. Can you give any reason for the falling off of the fishery on the west coast?—There has been no failure in the west coast fishery, where we have given assistance.

1728. But they are not improving?—They are where we have given assistance.

1729. Not at Galway?—No, because they have not the means of obtaining the money.

1730. Do you happen to know that at Galway there are restrictions by the Claddagh men, which are almost prohibitory except to the fishermen of that part?—Yes, they have superstitious rules of that kind.

1731. I am not alluding to superstitious rules, but the family rules that exist there?—They will not allow any stranger to fish in the Bay of Galway, except in their own particular mode.

1732. Do you not attribute the failure of the fishery to that, and the improvement of the eastern fisheries to their being carried out in a more enlightened way?—Decidedly.

1733. Do you think that money could be advanced or distributed by the Government under as useful restrictions as those under which it is advanced by your society, and with the same amount of public advantage?—Decidedly, and with perfect safety.

1734. Would those advances contribute to the prosperity of the country, in developing great local wealth, and also giving a maritime turn to the people?—I would just mention an instance about Galway, and about carrying out anything of that kind. Some years ago, in the year 1852 or 1853, there were large boats trawling in the Bay of Galway; those boats were so successful, and the fishery grounds were so productive for the market, that the Claddagh men seeing it, at once exerted themselves, and through private subscriptions got sums of money to enable them to trawl; 19 Claddagh boats actually started trawling,

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trawling, seeing the advantage of it in Galway Bay. They afterwards became improvident in their means, and they did not get money again to fit out their boats; they therefore gave up the trawling, and then they opposed every other system of fishing that was not carried on according to their own views and means.

1735. Is it not the fact that that unfortunate state of the Galway fishery is owing to the condition of the Claddagh fishery men, in a great degree?—I think so to a great degree, and I believe from what I know of the Claddagh men myself, for I have been out to sea with them; they are very good seamen, but they have not the boats or the gear.

1736. Or the requisite knowledge?—They have knowledge.

1737. I am talking of their knowledge of economic rules?—No, they have not that, but they have experience in the fisheries of the coast.

1738. Do you think that much benefit would be derived to the public of Ireland, and of course eventually to the empire, by paying the same attention, and showing the same liberality towards developing the sea-coast fisheries by public advances of money in Ireland as in Scotland?—I think so under certain rules; but you have no one in Ireland to carry it out.

1739. Do you think there would be the same advantage?—Decidedly.

1740. And a grant of 10,000 *l.* or 15,000 *l.* a year?—Would be attended with equally great advantage.

1741. Do you think it would be remunerative to the public, and that it would not be lost to the Government?—I think so.

1742. Could those advantages, do you think, be conveyed through the present Commissioners of Fisheries?—I think perfectly so, if they had a proper staff; but how can you expect the fisheries to be carried on when there is only one inspector to do the whole duty of the country.

1743. Assuming that considerable liberality was shown by the Government, both as to advances and as to staff, would that, in your opinion, be conducive to great public benefit?—I decidedly think so, and I think in time, with judicious management, it would be a perfectly safe advancement of money.

1744. Do you infer that from the fact of the small society which you represent having already been productive of so much good in developing the fisheries?—Decidedly.

1745. And that society has not lost money by it?—£. 15,000 has been lent, and in the last 10 years not one fraction has been lost.

1746. Has not the haddock almost disappeared from the Bay of Dublin?—It does not frequent the usual fishing ground where the small boats fish, but it has not left the coast of Ireland; on the south and west coast it is as abundant as ever; but it is a deep-water fish, and it keeps in soundings where the present shore boats cannot fish.

1747. As to the oyster fisheries, might not considerable improvement in the state of the oyster fisheries result if more care was bestowed upon getting licenses by proprietors?—Decidedly; that is quite clear: the regulations under the present Act of Parliament enable the Commissioners of Fisheries to protect and carry out the oyster fisheries extensively, and to grant licenses wherever they think a fair ground is afforded.

1748. Is there a distinction between those fish that are most saleable, salt and fresh, for instance take herrings, ling and cod, that will bear salting; and white fish, such as soles, plaice and so on, must there be a home market for the latter kind?—There is an immense home market for all the fish.

1749. Then you do not attribute the failure of the pursuit of that species of fish to the want of a home market?—Certainly not.

1750. You attribute it to the want of the same care that is given to them in Scotland?—Decidedly; that is it.

1751. You are aware that in all country towns in Ireland the population has fallen off very much?—To a great extent, certainly.

1752. Would you attribute the decline of the fisheries to the decline of the population, or the decline of the population in a great degree to the decline of the fisheries?—I do not think there is much decline with regard to the fisheries in Ireland, because the imports are very large.

1753. Do you know that Kinsale was formerly a very fashionable watering-place?—Yes.

1754. Can the decay of the fishing there for some years past be attributable to change of fashion?—I do not know; as I have said all through, whenever there is sufficient means of providing boats, the fisheries are succesfully and extensively carried on; but many have not the means, although there are certain individuals in Kinsale who have the means of doing it.

1755. Then is your evidence shortly this, that it would be of Imperial benefit to contribute to the improvement of the fisheries of Ireland by a judicious and extensive system of loans for boats?—Yes; I think that the system formerly established in Ireland, with regard to the general loan fund for the improvement of the fisheries, has been most beneficial to the country and to the fishermen, and I think the establishment of a general fishery loan fund throughout the country would be productive of great good.

1756. Do you think Ireland has the same claim, and that we may expect the same benefit from a liberal expenditure, as has been experienced in Scotland?—I do, decidedly.

1757. Mr. *Hankey.*] Do you know anything of a fund that was raised in 1846 or 1847, just after the famine, for the special purpose of fitting out Irish boats for the fisheries?—I do not know of any fund raised for that purpose, except the grant from the Reproductive Loan Fund.

1758. What I mean is a private fund; did you never hear of that?—I never heard of any private fund; it must have been to a very limited extent. I do not know anything of it.

1759. Mr. *Howes.*] With respect to the 5,000 *l.* which was granted under the Act of 1819, you quoted from a Parliamentary Paper, in which it is stated how many applications have been made out of it, what is that paper?—It is a Return that was called for by Sir Edward Grogan, the date of it is July 21st, 1864.

1760. Does it appear from that paper that many applications have been made for grants out of that annual sum of 5,000 *l.*?—It is stated, that numerous applications have from time to time been made to the Commissioners, both by letter and by personal interview, for pecuniary aid for various purposes, in consequence of the extreme distress among the people, but the answer has always been "no funds available."

1761. Who makes that statement?—It is signed by Mr. Hornsby, the Secretary of the Board of Public Works.

1762. Does it appear that those applications were made in conformity with the provisions of the

the Act of Parliament?—I do not know in what manner they were made.

1763. But the statement is that they were necessarily refused?—Necessarily refused, that is, that they had no money.

1764. Am I right in inferring from the answer which you gave to the Honourable Member for Mallow, that you think Government aid ought to be by grant instead of by loan?—Something of the same kind.

1765. Something upon the same plan as that adopted by your own society; is that what you mean?—Yes; I should in answer state, that the General Fishery Loan Fund, which was formerly established, gave a part of the money by way of grant, the remainder to be repaid by instalments by the fishermen at an interest of 5 *l.* per cent.; but the trustees lend the money without charging interest, and the entire sum is repaid by instalments.

1766. Would you renew the old system adopted by the Government under the Act of Parliament?—Yes, the General Loan Fund system; and I think if the fishermen were thrown upon their own industrial resources, they would be much more likely to be industrious and to repay the instalments, than by giving them any grant whatever.

1767. But the difficulty of your society has been to obtain security for the repayment by the fishermen, has it not?—Yes; it was not until a very few years back, when I had the honour of being one of the trustees, that the society was much pushed forward, for they did not understand the fisheries of the coast very well, and consequently it was not generally known through the country. It is now becoming more known, and the applications are more frequent.

1768. But would there not be the same difficulty on the part of the Government that you experienced?—Certainly not, because the Report of the Commissioners of Fisheries states that when the General Loan Fund existed the applications were most numerous, and they only gave the money upon the same terms, that is, upon two securities, and the bond or promissory note of the fishermen.

1769. The applications being numerous, were those which were granted numerous?—Yes, they were numerous, because the monies lent within three years by the Commissioners amounted to over 15,000 *l.* in small loans.

1770. And what loans were secured?—Those loans were all repaid except a portion which was given for the building of boats. The Government granted one-fourth of that amount, and the fishermen repaid three-fourths.

1771. Mr. *Lowe.*] I understand you to have said that you thought a system similar to that pursued in Scotland would be applicable to Ireland?—Yes, the grants made to Scotland.

1772. Will you state to the Committee what the system of Government grants is in Scotland?—There is an Act of 5 Geo. 4, which took up the 59 Geo. 3, with regard to the grant of 5,000 *l.* a year, and it detailed the application of the monies both to Ireland and Scotland. £. 5,000 a year was granted to Ireland for the purpose of building piers or quays, and 500 *l.* a year annually for the relief of poor fishermen. £. 3,000, under the same Act, was granted to Scotland, 2,500 *l.* of that to be applied to piers or quays for fishing purposes, and 500 *l.* for the relief of poor fishermen and boats; that 3,000 *l.* a year has been continued up to the present time to Scotland, and the 5,000 *l.* to Ireland has ceased to be drawn.

1773. Has Scotland been having that 3,000 *l.*?—Yes, they have had between 11,000 *l.* and 12,000 *l.* besides for the payment of officials connected with the branding of fish, for superintendence and record of fish taken, the protection of the fisheries, and the payment of the salaries of inspectors stationed throughout the ports of Scotland for carrying out the fisheries, especially the herring fisheries.

1774 Then they got about 15,000 *l.* altogether?—Yes.

1775. And you wish to see the same thing carried out in Ireland exactly; would you like, for instance, a system of branding carried out as it is in Scotland?—The branding system would be useless at present in Ireland, because we have not the fish to brand; but eventually, by the assistance given, as the Honourable Member for Mallow has said, by means of the establishment of a general loan fund, the fisheries, after they have provided boats and means of fishing on the coast of Ireland, would be very extensively developed, then the branding and other systems in existence in Scotland would be equally applicable to Ireland, and Ireland would be equally deserving of having such grants.

1776. *Chairman.*] In the sale of fish, it is a great detriment if they cannot be sold on account of the want of a brand, is it not?—The brand is of this importance. It is entirely owing to the quality and the flavour of the herring being proved. Howth or Arklow herrings are equal in quality to those of Loch Fyne; and the Killybegs and Galway herrings are superior to the herrings of Caithness or the Orkneys; but no matter what the cure may be, or the system adopted in Ireland with regard to curing, they would not be countenanced by continental markets without the official brand.

1777. But the brand, you say, is not required at present?—No.

1778. *Sir Stafford Northcote.*] I observe in this paper that you have quoted from the 59 Geo. 3, which is said to have been repealed by 1 Will. 4, c. 54; do you contend that it has not been repealed so far as relates to the 5,000 *l.* a year?—Yes; if you refer to 1 Will. 4, and the section quoted there, you will find it has nothing to do with repealing the 59 Geo. 3. The first five sections of 1 Will. 4 entirely refer to Scotland, the following sections refer to Ireland; and there is no repealing whatever of that portion of the 66th section, c. 109, of the 59 Geo. 3, relating to the grant of the 5,000 *l.* a year to Ireland; it is not repealed at all.

1779. Do you also consider that it is not repealed by the Act of 1842?—Certainly. I have quoted from this work, the Compilation of the Fisheries Laws, by Mr. Longfield, which has been compiled with great care. The Acts are still in force, those portions of them; and the 5 & 6 Vict. repeals those Acts, except so far as relates to piers and for the relief of poor fishermen.

1780. Mr. *Longfield.*] Is it not the fact that the Government say it is repealed, and so withhold the money?—Yes, but it is not; and, under the same Act, Scotland is drawing 3,000 *l.* a year at present.

1781. But the paymaster says it is repealed?—I do not know what may be said; I say it is as much in force as ever.

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1782. Mr. *Longfield.*] You have been for many years Assistant Commissioner of Fisheries in Ireland, have you not?—I have been one of the Commissioners of Fisheries since the passing of the 11 & 12 Vict.

1783. Your attention and your duties have been devoted a good deal to the deep sea fisheries of the coast?—Yes.

1784. Can you state to the Committee shortly what is the general state of those coast fisheries of Ireland now?—Generally speaking, they have been and are declining; there are some exceptions.

1785. As to the general state, can you give the Committee any idea of the causes which have led to that decline?—It is a very wide question; it has arisen from a variety of causes, none greater than the diminution of the population, and the distress which followed the unfortunate season of 1846-7.

1786. The want of capital; do you attribute any part of the decline of the fisheries to that?—Means would have been useful no doubt, but capital has been tried on a very large scale by a company established, and unsuccessfully tried.

1787. It may be unskilfully tried also?—Very likely.

1788. Have the fisheries in different parts of Ireland been improved?—There is one part of Ireland where a very important fishery has improved to a most amazing extent; on the east coast generally, but most particularly at Howth.

1789. Has judicious assistance been given to that fishery by the society of which you have heard just now?—So I understand from Mr. Andrews; I never heard it before.

1790. Have you formed an opinion as to the judiciousness of the Government placing funds at the disposal of your Board and yourself for the promotion and improvement and development of the coast fisheries of Ireland?—I have heard many statements about the contrast between what was alleged to be the great liberality to Scotland and the parsimony to Ireland; but there is no parallel in the circumstances of the countries; Scotland has a certain and positive and continued herring fishery, all for export; Scotland has required a large establishment, which necessarily must have been paid for, for purposes that Ireland does not require at all, simply because we have not had the herrings to cure in Ireland for many years; but our herring fishery has almost deserted the coast till within the last three years it has returned to the east coast; but the idea of a large establishment for branding herrings is quite preposterous for Ireland.

1791. I am not talking of a branding establishment; but is it your opinion, or have you formed any opinion, as to whether placing at the disposal of your Board a sum annually, by Parliament, to be applied to the promotion of the fisheries of Ireland, would be attended with benefit or not?—Money is a very useful thing for any purpose; but I should like to know in what way it is to be applied before I can answer the question.

1792. Have you formed any opinion upon it?—I am convinced that aiding the people by loans will be very useful, but it would be very operose and very troublesome, and perhaps would require a larger establishment than we have at present, for we have almost none.

1793. Have you devoted considerable attention to the development of the oyster fisheries in Ireland?—Yes, recently; for the last five or six years particularly.

1794. If it was carried out, do you think it would be attended with much advantage throughout Ireland?—I hope so; we have done all that we could towards promoting it.

1795. Do you receive many applications for licenses?—We have received several, and we have granted a great many, and there are further applications in progress.

1796. Can you make any suggestion to the Committee as to the improvement of the sea-coast fisheries of Ireland, or as to means by which it may best be promoted?—I brought with me to town a proof of our Annual Report of this year, and it is one of the most comprehensive that we have furnished for a considerable time; it will be laid on the table of the House I expect within a week; it comprises our general views upon the subject; it is very difficult to give an answer to such a question, or to say what would be generally beneficial to the fisheries; we only know that some improvement is required.

1797. Would the culture of oysters give much employment to the labourer in Ireland?—Considerable; we have been very much enlightened lately on the subject of oyster culture, by the practical operations of some English gentlemen who have come upon the coast, and become the owners of licensed beds, more particularly in Clew Bay. A gentleman from Whitstable became the owner of a license which was granted to a family in the neighbourhood who were the owners of the property there, and he has been pursuing the very judicious course which was practised at Whitstable, and very advantageously to the country, inasmuch as it has been training the people as to how the oyster fishery is to be increased and improved we find it extremely difficult to restrain a tendency to over dredging; within the last month we have exercised the power placed in our hands, and have limited the months during which oysters may be taken, and by those means, and by the granting of licenses, we hope to regenerate those places that have been partially exhausted, and to prevent the destruction which has been in progress.

1798. Then the oyster culture is being developed in Ireland, and is productive of profit and advantage?—I hope so.

1799. And it leads to a great deal of employment?—Yes.

1800. Mr. *Howes.*] Do you know the Act 59 Geo. 3, c. 109?—Yes.

1801. Is that Act now in force?—No.

1802. Do you remember by what Act it was repealed?—I have always considered that that and all previous Acts to the 5 & 6 Vict. have been repealed.

1803. *Chairman.*] Is there not some difference of opinion as to that?—A gentleman has stated before this Committee that there is an exception in reference to assistance to poor fishermen and in reference to building piers. We were always under the impression that 5 & 6 Vict. repealed previous Acts, and there was what was termed a Pier

Pier and Harbour Act passed afterwards for the encouragement of the building of piers.

1804. Mr. *Lowe.*] What section is it that you point to as repealing that Act?—The 1st section of 5 & 6 Vict.

1805. Mr. *Howes.*] Is the Act 59 Geo. 3, c. 109, mentioned, with many other Acts, in the first section of the Act of 1842?—It is.

1806. Do you know the return which was asked for by Sir Edward Grogan relating to the Fisheries of Ireland, and given last year by the Government?—Yes, I do (*referring to it.*) This is extracted from former returns that had been given.

1807. Do you see a statement in the third page of that paper, stating that numerous applications have been made for grants out of the sum of 5,000 *l.*?—Yes.

1808. And that those applications have been necessarily refused?—Yes.

1809. Does it not appear that those applications were made under 5 & 6 Vict.?—Yes, they were always made under that Act.

1810. And it appears from the previous paragraph in that paper, that under the Act referred to, no fund was provided to meet such applications?—Yes.

1811. *Chairman.*] Did you ever get the opinion of the law officers of the Crown that those Acts were repealed?—I am not aware that it was ever sought for.

1812. But when application was made and money demanded, did not the Commissioners think it worth while to find out whether the Act was really repealed or not; was it not their duty to know whether they were acting under an Act of Parliament, or whether they were refusing contrary to an Act of Parliament?—I can only say that it was not done. The impression of the Board, under the authority of their law adviser, was, that there did not exist any power to comply with those applications.

1813. If it should be found now that the Act is not repealed, would there not be an arrear of 34 years of 5,000 *l.* a year due to Ireland, at least so far as that Act would give it?—I cannot imagine that there is any possibility of a construction of that kind being applied to any portion of the Act. There may be, as to the balance outstanding, some question, but certainly there can be none whatever as to its continuity.

1814. But if that Act is in force now, has not 5,000 *l.* a year for 34 years, authorised by that Act to be paid, remained unpaid?—If it was in force.

1815. Mr. *Lowe.*] Do I understand you to say, that the proviso refers to an Act subsequently to be passed?—No; the proviso refers to contracts, as I conceive, having been made for the completion of the building of piers.

1816. Under the Act?—Yes, and to the recovery of certain balances that were due by the fishermen on account of loans given to them from the fund. There was no intention whatever that that system should, under 5 & 6 Vict., be continued.

1817. Inchoate transactions under that Act were sanctioned by it; is that what you understand by it?—Yes.

1818. Mr. *Howes.*] Will you read the proviso?—"Provided always, that nothing herein contained shall be construed to repeal any enactment or provisions of the said Act, or any of them, which relate to piers or assisting poor fishermen, or any powers in respect thereof, now vested in the Commissioners of Public Works in Ireland, or any monies applicable to such purposes in the hands of the said Commissioners of Public Works, but that all such enactments and provisions relating to piers or quays, or to the assistance of poor fishermen, and all such powers in respect thereof, or the application of other monies applicable to such purposes, shall remain in full force and effect." I can only say, that that has been construed by our Board as referring merely to the winding up of outstanding concerns.

1819. *Chairman.*] Then, if the Act be as we interpret it, the Board has been for 34 years in ignorance of the Act under which they were working?—In explanation, I may say, that I rather think there were subsequent Acts to the 59th Geo. 3, which limited the period, and progressively diminished the amount of the annual grant for those purposes.

1820. Mr. *Longfield.*] In the work on Fisheries by Mr. Jagoe, I read this paragraph, at p. 8: "By the 59th of Geo. 3, c. 109, the Lord Lieutenant is authorised to advance 5,000 *l.* per annum in aid of the Irish fisheries. There were doubts as to whether this Act continued in operation. Some lawyers were of opinion that it did so continue this section leaves no doubt of its repeal, except as to the 5,000 *l.* a year, which is now applicable to such purposes as the Commissioners shall think fit, for the encouragement of the fisheries by the erection of piers, quays and the assistance of poor fishermen;" do you concur in that opinion?—I do not.

1821. Lord *John Browne.*] Has your attention been a good deal directed to the cultivation of oysters lately in Ireland?—Yes.

1822. Is there any branch of the deep sea fisheries that you think of more importance than oysters?—They are very important.

1823. Are they, in your opinion, capable of almost indefinite extension?—They are to a very considerable extent.

1824. Do you recollect a statement made by Captain Austin?—Yes.

1825. Do you concur in some of his statements; for instance, that the Carlingford beds were entirely destoyed, that the Sligo beds, the Clare beds, the Tralee, Roundstone and Kilkerran beds have been entirely exhausted, all of which were formerly public beds?—One of those cases which you have mentioned furnishes a very excellent illustration of the benefit arising from the exercise of those powers, which we now have to an ample extent, and which are in progress of being exercised; and that in Carlingford Bay. About eight years ago, Carlingford Bay might be considered to have been barren; an application was made by a gentleman for the grant of a license on a portion of the shore which was favourable for the formation of beds; it was given, and accompanying it was a restriction as to the period during which oysters might be taken, a very considerable restriction, limiting the period to four months instead of eight. That has produced such an effect, that there were productively fishing in Carlingford Bay last year, 234 vessels.

1826. Do you recollect a statement by Captain Austin, that on the Whitstable beds 182,000 *l.* a year is spent in labour?—I do.

1827. Do you believe that to be a correct statement?—I have no reason to doubt it.

1828. Do you believe that the same amount of employment would be given on similar beds?—I

Mr. *J. R. Barry.*

27 April 1865.

am quite sure that the employment given in the judicious cultivation of oysters would infinitely more than countervail any diminution of the public rights on the public beds.

1829. Do you concur in his opinion that at least 2,000 men and 400 boats could be constantly employed in Cleugh Bay if there was an extension of the system of licensing private boats?—A great deal of employment no doubt would be given.

1830. Do you believe that there is any exaggeration in that statement?—I cannot say; it is a large number; I believe a great deal of employment might be given.

Mr. JOHN HOARE, called in; and Examined.

Mr. *J. Hoare.*

1831. *Chairman.*] ARE you connected with the fisheries in Ireland?—I am connected with them as a boat owner, and also as an extensive fish merchant in Dublin, and a general merchant in all kinds of fish.

1832. In what countries?—In Ireland, England and Scotland.

1833. Will you state to the Committee your views of the present state of the fisheries in Ireland?—They have recently been very much developed; the herring fishery has always been there, but it has not been followed so extensively as recently; I attribute that to the large number of boats which come from Scotland, England, the Isle of Man, &c., which were not previously so numerous.

1834. Do you think the fish are abundant on the coast of Ireland?—Very; in fact, on the west coast they are as abundant as they are on the east coast, and I think, if the trade was developed to a similar extent, the result would be similar.

1835. Do you think the fish on the west coast is as abundant as in Scotland?—I think much more abundant and superior in quality to the Scotch herring, and the same remark might be applied to the mackerel, cod, and ling.

1836. Have you any boats on the west coast of Ireland?—Not at present.

1837. But you think the fishery on the west coast, if developed, would be productive?—Undoubtedly, particularly on the Sligo coast at Killybegs, &c.

1838. Why do you think it is not carried on to a greater extent at present?—The fishermen have very much deteriorated, their boats have been wrecked, and their gear is insufficient.

1839. Do you think, if the means were afforded to the fishermen of having boats and gear, they would apply themselves to the fishery, and catch a great deal more?—Yes; on that part of the coast.

1840. Would you suggest that as one of the means of repairing the state of things?—Certainly.

1841. Do you think, if the same means were taken which are now in force in Scotland, it would forward the prosperity of the Irish fisheries?—It would if the Irish Fishery Board was based on the same principle as the Scotch. I speak as one of the trade extensively interested with the fisheries; and I may also say, I appear here as it were as the representative of the trade; the only thing which the trade wants, and that to a certain extent includes the fishermen, to bring the Irish fishery to a similar extent to that of Scotland, is an institution for branding, which Mr. Barry, I am sorry to hear, thinks quite preposterous for Ireland; he says there are no herrings to be caught there. I maintain that it is most important. We import into Ireland annually something like 100,000 barrels of herrings; and I maintain that if we had a branding institution at Howth, on the east coast alone, we should be able to supply our own country with that 100,000 barrels, without importing them, as we do now from Scotland.

1842. Do you think it would be of use until the boats are made?—Private interests have sufficient boats already to manufacture that quantity annually.

1843. Do you think there are sufficient boats?—Yes. In 1863 some Scotchmen came to Ireland, and they cured 500 of those barrels the same as we import from Scotland; last year, some of those Scotchmen came again and cured 5,000, and this year, I think I am not exaggerating, if I say it is very probable we shall cure between 40,000 and 50,000 in Howth.

1844. Are those barrels of herrings not saleable, or not saleable at the same price, if they are not branded?—It certainly deteriorates the value in this respect; the chief markets for the Scotch barrels are the Baltic, Finland, and other continental markets; by branding them a guarantee is given of the quality of the fish, that is, that they are not spent fish, and that the barrels are really full. The operation they go through in branding them is this: there are two general inspectors, one at Leith and the other at Greenock, and each division extends over different places enumerated. There are four districts, and ten officers for branding in each of those districts; the general inspector has the supervision; they go round, and the officers must see that the fish are properly gutted and salted, and when salted that they do not remain, without being gutted and packed, more than 24 hours after they are caught; they have to be packed in barrels and left on their sides for three or four days; they are then examined to see that they are all full fish, and not spent fish, and that is the system that we want, at Howth particularly.

1845. If that system was adopted in Ireland, do you think the number of boats that there are now would justify the expense?—It certainly would; but there is another thing that must be taken into consideration, that the fishery at Howth, in regard to the number of boats, has increased in the last five years nearly 100 per cent.; last year 500 or 600 boats were at Howth, this year probably there may be 600 or 700. I am aware that there are several boats coming from Scotland which have never been there before, and others are coming from the east and west coast of England, and from the Yorkshire coast.

1846. Are you aware of the system of loans for the building of boats by the society of which Mr. Andrews is trustee?—I know a little about it; but I am giving merely my own practical information, connected with the working of the fisheries.

1847. Do you think that an extension of assistance, given to fishermen to build boats, would increase the trade?—It would, to a certain extent; but private enterprise is carried on more extensively than many are probably aware of at present.

1848. Is

1848. Is not that among the wealthier classes and not amongst the poor?—Yes.

1849. Private enterprise, of course, does not require any assistance; but as to the fishermen?—It would, of course, be a great acquisition.

1850. Do you think there is any large surplus of fresh fish beyond that for the usual market consumed in Ireland?—Ireland imports a great quantity of fish; but she exports five or 10 times the quantity that she imports.

1851. Is it salted?—Yes, salted fish, herrings; of course; with regard to salmon and oysters, not one-hundredth part is consumed in Ireland to that which is exported.

1852. Where is it exported to?—To England.

1853. Mr. *Longfield.*] As to the deep sea fisheries, have you anything to suggest?—It only requires proper development.

1854. The fish are there?—No doubt.

1855. Would it be of advantage to the country to assist the poor fishermen in making boats and gear in those districts where private enterprise has not reached?—Undoubtedly; but the chief thing we want in Ireland is an institution similar to that of Scotland for branding herrings, for we are not only able to supply our own country with herrings, but we should be able to send hundreds of thousands to foreign markets every year. Last year 5,000 barrels were cured at Howth; they were made up in great haste, under the inclemency of the weather; they were lying on the pier frequently a week before they were made up, in the rain, and these were sent to Glasgow, where they realised from 20 to 25 per cent. more than the best full Crown branded Scotch herrings, from the superiority of the fish; they were cured at Howth; we have no curing house there. One person in our trade applied to the Board of Works for permission to erect a curing house on the pier, and they would not give their assent to the application; if we had proper curing houses there, in place of 5,000 barrels being cured last year, there would have been 20,000.

1856. Is not the employment in the trade confined to Howth and one or two localities; it is not general through the country is it?—You may call it the east coast, it appears in the Civil Service Estimates: for instance, at Peterhead and other places in Scotland, there are six officers; they have 180*l.* a year for branding barrels; we could classify them in the same way on the east coast of Ireland, at Arklow and other places.

1857. Do they catch at any of those places except Howth sufficient to justify the employment of an officer?—Yes, Howth is the principal depôt certainly for the fish that come in, in consequence of the harbour, but a great quantity is sold at Belbriggan and Arklow; at Arklow, boats realised over 23,000*l.* this year.

1858. Is that fish cured, or salt fish?—Salt fish. Last year, the Bank of Ireland opened a branch at Arklow, and the deposit receipts, I believe, exceeded 50,000*l.*, and the greater portion of that belong to the Irish fishermen, at least to the local trade.

1859. Do you think that the improvement of the trade extends all over Ireland, or is it only in that locality?—It has only been developed on the east coast; but it is applicable to the west coast and to the south coast; for instance, at Kinsale, a great many Manx and Scotch boats came mackerel fishing this year, and they have been realising 100*l.* a week; their nets are larger, about a mile long, and much deeper than ours.

1860. If the Irish boats had the same gear, would they not make the same profit?—Certainly; that has been illustrated at Howth.

1861. Is the development of the herring fishery generally attended with the development of other fisheries?—Certainly.

1862. That is, the men who catch herrings catch other fish?—Yes; the herring fishery lasts from June to Christmas; at other times they would be employed in the mackerel fishery, &c.

1863. The improvement of the herring fishery, therefore, would improve all fisheries?—Yes; but the best thing would be to have a regular institution for branding, as in Scotland, that is the chief thing we require; if we had that we should get on.

1864. Are you aware that the branding system in Scotland has been censured, and that efforts are being made to knock it off?—I am not aware of it, nor do I believe it.

1865. You are in favour of it?—Certainly; in fact, it is the very thing we require; I look at it in a trade point of view.

1866. Do you assimilate it to the branding of butter which is extensively manufactured in Ireland?—It has much the same effect, it guarantees the quality.

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EXCHEQUER BILL LOANS.

Name of Union.	Amount Advanced.	Amount Repaid.	Amount Outstanding.	Name of Union.	Amount Advanced.	Amount Repaid.	Amount Outstanding.
	£. s.	£. s.	£. s.		£. s.	£. s.	£. s.
Belfast	12,000 –	4,169 –	7,831 –	Lisnaskear	6,800 –	743 –	6,057 –
Celbridge	5,800 –	1,219 –	4,581 –	Larne	5,800 –	580 –	5,220 –
Londonderry	8,700 –	870 –	7,830 –	Athy	6,700 –	774 –	5,926 –
Kilmallock	8,800 –	440 –	8,360 –	Clogher	6,300 –	325 –	5,975 –
Lurgan	7,900 –	2,652 10	5,247 10	Naas	2,500 –	125 –	2,375 –
Naas	6,500 –	325 –	6,175 –	Kilkeel	1,000 –	50 –	950 –
Rathkeale	8,100 –	1,648 –	6,452 –	Londonderry	1,400 –	70 –	1,330 –
Dunshaughlin	6,100 –	978 –	5,122 –	Baltinglass	1,000 –	350 –	650 –
Tipperary	7,500 –	622 –	6,878 –	Castlederg	850 –	42 10	807 10
Lisburn	8,300 –	2,416 –	5,884 –	Dunshaughlin	650 –	130 –	520 –
South Dublin	7,000 –	3,150 –	3,850 –	Lurgan	650 –	195 –	455 –
Castlederg	2,600 –	374 10	2,225 10	Newtown Ards	1,050 –	315 –	735 –
Waterford	10,400 –	520 –	9,880 –				
North Dublin	5,600 –	2,593 –	3,007 –	£.	361,800 –	47,485 –	314,315 –
Banbridge	8,000 –	400 –	7,600 –				
Armagh	10,000 –	818 –	9,182 –	Clonmel	600 –	150 –	450 –
Trim	7,300 –	627 10	6,672 10	Lisburn	1,000 –	300 –	700 –
Cork	16,800 –	250 –	16,550 –	Trim	1,450 –	72 10	1,377 10
Kilkeel	5,300 –	265 –	5,035 –	Rathkeale	1,600 –	480 –	1,120 –
Rathdown	7,600 –	380 –	7,220 –	Rathdrum	500 –	25 –	475 –
Omagh	7,900 –	790 –	7,110 –	Dungannon	1,150 –	57 10	1,092 10
Strabane	8,300 –	415 –	7,885 –	Ballymoney	700 –	210 –	490 –
Nenagh	9,900 –	1,090 –	8,810 –	Monaghan	1,500 –	450 –	1,050 –
Cookstown	6,300 –	315 –	5,985 –	Magherafelt	1,150 –	57 10	1,092 10
Newtown Ards	6,700 –	2,220 10	4,479 10	Downpatrick	1,300 –	390 –	910 –
Dundalk	7,400 –	773 –	6,627 –	Kanturk	1,100 –	165 –	935 –
Clonmel	2,300 –	944 –	1,356 –	New Ross	400 –	120 –	280 –
Monaghan	8,700 –	863 –	7,837 –	Belfast	1,500 –	450 –	1,050 –
Limavady	8,000 –	400 –	7,600 –	Coleraine	650 –	162 10	487 10
Rathdrum	7,800 –	780 –	7,020 –	Nenagh	500 –	25 –	475 –
Magherafelt	8,100 –	810 –	7,290 –	Athy	300 –	45 –	255 –
Baltinglass	6,800 –	1,109 –	5,691 –	Ballycastle	400 –	20 –	380 –
Kilrush	8,900 –	927 –	7,973 –	Kilrush	450 –	45 –	405 –
Gorey	6,700 –	787 –	5,913 –	Carrickmacross	600 –	30 –	570 –
Dungarvon	8,300 –	415 –	7,885 –	Coleraine	1,400 –	210 –	1,190 –
Dungannon	8,000 –	1,200 –	6,800 –	Lurgan	1,600 –	235 4	1,364 16
Coleraine	9,000 –	1,035 10	7,964 10	Rathkeale	1,800 –	180 –	1,620 –
South Dublin	3,000 –	980 –	2,020 –	Monaghan	2,000 –	200 –	1,800 –
North Dublin	2,400 –	960 –	1,440 –	Sligo	2,800 –	140 –	2,660 –
Ballymoney	8,500 –	569 –	7,931 –	Dunshaughlin	1,400 –	140 –	1,260 –
Gortin	3,600 –	343 –	3,257 –	Bandon	1,500 –	150 –	1,350 –
Ballycastle	5,300 –	365 –	4,935 –	Lisburn	1,500 –	150 –	1,350 –
Clones	7,300 –	801 –	6,499 –				
Antrim	7,600 –	176 –	7,424 –	£.	392,650 –	52,145 4	340,504 16

	£. s.
Amount repaid as above	52,145 4
Remitted by Treasury Letter of 21st February 1845, upon Lieut. Col. Barney's Report	47,268 –
Ditto, under the 13 & 14 Vict. c. 14, and Treasury Letter of 17th July 1850	1,323,266 16
Total Advances £.	1,422,680 –

Appendix, No. 2.

PAPER handed in by Colonel *McKerlie.*

RETURN showing the Specific Sums advanced at different Periods for Purposes of Improvement of Lands by Drainage, &c., in *Ireland.*

PURPOSE OF ADVANCE.	Advances to 31st March 1865. As Loan.	Advances to 31st March 1865. As Free Grant.	Portion of Loan Remitted.	Total Rentcharge, &c., to be Repaid on Portion of Loan under Repayment (less Interest Cancelled by Redemption, and Income Tax allowed to this Date).	Repayments to 31st March 1865.	Balance of Rentcharges to be Repaid during the Remaining Years over which the several Charges extend.
Arterial Drainage, per Act 5 & 6 Vict. c. 89, and subsequent Acts	£. s. d. (a) 1,932,458 – 7	£. s. d. – nil – –	£. s. d. 961,732 17 3	£. s. d. (b)*1,389,395 3 4	£. s. d. (c) 669,524 17 7	£. s. d. 719,870 5 9
Navigation in connection with Drainage	(a) 310,807 8 4	141,073 – –	228,827 15 10	81,979 12 6	(c) 81,979 12 6	– nil – –
Land Improvement, thorough Drainage, Farm Buildings and Labourers' Cottages:						
Act 10 Vict. c. 32 – – – £. 1,500,000						
Act 12 Vict. c. 23 – – – 300,000						
Act 13 & 14 Vict. c. 31 – – 200,000						
Total authorised – – £. 2,000,000	† 1,804,467 4 4	– nil – –	– nil – –	‡ 2,516,549 9 –	1,460,178 5 8	1,056,371 3 4
£.	4,047,732 13 3	141,073 – –	1,190,560 13 1	3,987,924 4 10	2,211,682 15 9	1,776,241 9 1

	£. s. d.
* Total principal to be repaid – –	970,725 3 4
Interest on the principal of an annuity, after deducting estimated interest cancelled on redemptions, &c. to this date – – – –	418,670 – –
	£. 1,389,395 3 4

No interest charged on these advances, subsequent to award.

	£. s. d.
† The total rentcharge created on this sum amounts to – – –	2,580,387 16 2
Reduced by redemptions, and income tax allowed – – –	63,838 7 2
	‡ £. 2,516,549 9 –

Total Expenditure for Drainage Improvements £. 4,188,805. 13. 3.

Total Remission and Free Grant £. 1,331,633. 13. 1.

(a) £. 2,075,893 of these amounts were advanced out of the Public Works (Ireland) Loan Fund, the remainder (167,372 *l.*) was obtained on Debenture Loans, which were paid off out of the first moneys recovered under the awards.

(b) Includes 70,201 *l.* for county bridges, &c., on which no interest is charged, of which 68,287 *l.* has been repaid.

(c) These are the total sums recovered from proprietors and counties, and do not include the sum of 388,299 *l.* 10 *s.* 11 *d.* paid to the Exchequer for interest on the Public Loans during the progress of the Works, which formed a part of the cost of the several projects.

Office of Public Works, Dublin, 10 April 1865.

W. Young, Accountant.

J. G. McKerlie.

Appendix, No. 3.

PAPERS handed in by Mr. *Andrews*, 27 April 1865.

STATEMENT relating to the Irish Fisheries, &c. App. No. 3.

The Irish fisheries have always been the object of supposed intense interest, and the statements of those connected with the Legislature, as well as the multitude of reports that have emanated from public departments, and official inquiries, have ever reiterated the one view, the absolute duty of giving encouragement to a very large body of an industrious and peaceable community, the coast population, which must of necessity greatly add to the naval strength and to the maritime position of the kingdom.

From the period of the Union down to the year 1819 a very manifest neglect was evinced towards the Irish fisheries by the Imperial Legislature.

To the latter date, the Act 25 Geo. 3, which from time to time underwent some insignificant changes, appeared to be, in respect to bounties and other details, the great regulator of the Irish fisheries. This Act limited the bounty of 20*s.* per ton on the admeasurement of the vessel to fish for curing. 25 Geo. 3.

In 1819 a more energetic disposition was evinced for their encouragement, and an Act was passed, 59 Geo. 3, c. 109, by which a Board of Commissioners and officers were appointed, under the warrant of the Lord Lieutenant, to carry that Act into execution, and the 46th section of the Act required a report of their proceedings each year, on or before the 1st day of June, to be delivered to the Lord Lieutenant, and a copy thereof laid before both Houses of Parliament within 14 days after the commencement of the ensuing Session. 59 Geo. 3, c. 109.

These reports show the labours of the Commissioners, up to the time of the abolition of the powers vested in them in 1830 by several Acts, to have been most energetically and usefully carried out. The bounties allocated gave such an impetus to the enterprise of the fishermen, that we learn from the reports that the number of vessels engaged in the fisheries increased from 27 in 1819 to 27,142 in 1823. From 1824 to 1830 the bounties were gradually withdrawn, when they altogether ceased. So great, however, had been the encouragement, and the judicious application of a loan fund, that the number of fishermen in each year had steadily increased. From the year 1829 the men actually engaged numbered 63,421. The formation of a fine body of seamen was the result, which influenced the Commissioners in their report for 1823 to express strongly the following opinions:—

"That it was not as to whether an annual sum of money, disposed of in bounties, should make a productive pecuniary return, but whether the money so bestowed as to relieve poverty, promote industry, increase the general supply of food, and furnish a main supply of naval strength, be not of a more politic nature, as well as benevolent application of the public funds, producing moral and political results greatly paramount to any pecuniary consideration."

The application of the bounties, however, had not been attended by that utility which their allocation had contemplated, and their consequent withdrawal was most judiciously decided, yet unfortunately with no suggestive means for still keeping up, even to a limited extent, the spirit that had been engendered.

The 10 years of office of the Commissioners had been largely beneficial to the country: 68 piers had been erected on various parts of the coasts, 151,390*l.* 4*s.* 7½*d.* had been distributed in bounties, while a loan fund, that had been established with most beneficial effects, had granted, in the three years previous to 1829, 14,031*l.* 11*s.* 1*d.* in loans. From 1830 all encouragement of the kind ceased, and annually, since that period, the Irish fisheries have been decreasing.

By the 66th section of the Act 59 Geo. 3, c. 109, a sum of money, not exceeding 5,000*l.* per annum Irish currency, was placed at the disposal of the Commissioners for the encouragement of the coast fisheries of Ireland, "under such regulations and rules as to them might appear best calculated for the furtherance of their objects." 66 sec. 59 Geo. 3, c. 109.

This fund had been suffered to lapse in the years 1819 and 1820. The Commissioners, however, obtained the whole of the arrears of the fund, with that for 1823, from the Lords of the Treasury, which was most usefully allocated in the completion of piers, constructing new safety harbours, building and repairing fishermen's boats, and other aids to the poorer fishermen of the coast. In this they had been munificently assisted by the London Relief and Tavern Committees.

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The Act 59 Geo. 3 had given great stimulus to the seamanship by the bounty of 3 *l.* per ton on the oil obtained in the sunfish fishery, and the Act of 1 Geo. 4, c. 82, also allowed 3 *l.* per ton on vessels clearing under certain regulations for the deep-sea herring fishery, and fishing in the manner prescribed by the Act.

1 Geo. 4, c. 82.

The erection of fishery piers and small safety harbours had occupied much of the attention of the Commissioners, as after three years of experience they were induced to believe that the encouragement and consequent advancement of the coast fisheries of Ireland could not be more promptly or effectually promoted than by applying the annual grant in question (5,000 *l.* Irish currency) to the erection of small piers and breakwaters on such parts of the coast as are at present without any protection of this nature, but where, at the same time, some of the finest fishing-stations are situated.

In 1826 the Commissioners established a loan fund out of the moneys that had again accumulated under the 66th section Geo. 3, c. 109. £.10,000 was thus allocated to the formation of a general fishery loan fund, by means of which the wants of poor fishermen in every part of the coast of Ireland may be relieved.

The money was employed in building hookers; one-fourth of the sum was granted, and the remaining three-fourths of the cost was in the first instance paid out of the fund. No interest was charged until the boat had been completed. Loans were made for repairing boats, and providing all necessary gear and materials. The advances were repayable by instalments on the promissory note of the fishermen, with two securities, and an interest of 5 per cent. was charged to cover losses. The manner in which these loans were sought by the fishermen, and the beneficial results that were occasioned, exceeded the most sanguine expectations of the Commissioners.

5 Geo. 4, c. 64.

The Act 5 Geo. 4, cap. 64, restricted the application of all future grants to two specific objects; namely, the erection and repairs of piers and quays, and repairs of poor fishermen's boats. £.4,500 annually for the former purpose, and 500 *l.* for the repairs of poor fishermen's boats, at such ports or places where piers or quays are or shall be built.

This Act much impeded the progress of completing and building piers by local difficulties, chiefly arising from the impossibility of procuring the necessary contributions in aid of their formation or their future repairs, as prescribed by that Act.

7 Geo. 4, c. 47.

The Act of 7 Geo. 4, cap. 47, expired on the 5th of April 1830, at which date all bounties so liberally granted under the several preceding Acts, 59 Geo. 3, c. 109, and 1 Geo. 4, c. 82, were withdrawn. They had, however, been unavailing for some time to the fishermen, a class very generally destitute of capital; and it was found how invaluable had been the aid of the Irish fishery loan fund, the safe administration of which had been productive of most important benefit. At that period the fund consisted of cash and securities to an amount of 17,362 *l.* 14 *s.* 1 *d.* This had been made up of the savings of the fund of the annual grant under 59 Geo. 3, c. 109, and a sum incorporated by the authority of the London Tavern Committee.

1 Will. 4, c. 54.

By the Act 1 Will. 4, c. 54, the whole of the powers vested in the Commissioners of Fisheries were singularly transferred to the Directors of Inland Navigation, who were to superintend the carrying out of the deep-sea fisheries, and the completion of all works commenced previous to 5th April 1830. For those objects Section 8 of that Act provided sums out of the annual grants under 59 Geo. 3, c. 109, to the extent of 13,000 *l*, to be paid out of the consolidated fund arising in Ireland, in certain sums issued annually during a period of five years.

1 & 2 Will. 4, c. 33, s. 106.

The 1 & 2 Will. 4, c. 33, s. 106, transferred all right, title, and interest in the Irish fisheries, with all powers and authorities vested by 1 Will. 4, c. 54, in the Directors of Inland Navigation, to the Commissioners of Public Works.

1842.

The Act of 1842, brought in by Lord Eliot, underwent the scrutiny of a Parliamentary Committee, and resulted in the passing of the Act 5 & 6 Vict. c. 106.

5 & 6 Vict. c. 106.

This Act placed the Irish fishery laws on a most comprehensive and extensive basis. It consolidated and amended 26 statutes, and all such enactments then in force in Ireland relating to the fisheries.

"That from and after the passing of this Act, the several Acts, and parts of Acts, hereinafter mentioned, so far only as they or any part of them relate to the fisheries of Ireland, and all Acts, or parts of Acts, continuing or perpetuating the same, so far only as relates to such continuation or perpetuation, and all enactments whatsoever now in force in Ireland relating to the fisheries thereof, shall be repealed (except only so far as is hereinafter excepted and provided for); that is to say, an Act, &c. &c. &c.

"Provided always, that nothing herein contained shall be construed to repeal any enactments or provisions of the said Acts, or any of them, which relate to piers or quays, or assisting poor fishermen, or any powers in respect thereof, now vested in the Commissioners of Public Works in Ireland, or any moneys applicable to such purposes in the hands of the said Commissioners of Public Works; but that all such enactments and provisions relating to piers or quays, or the assistance of poor fishermen, and all such powers in respect thereof, or of the application of the moneys applicable to such purposes, shall remain in full force and effect."

Having now given a summary of the position of the Irish fisheries, and the Acts relating thereto,

thereto, it remains to show to what extent pecuniary encouragement has been afforded, and this will be confined to Returns printed by order of the House of Commons. App. No. 3.

Ireland has, as has been observed, received but little aid previous to 1819, and in 1830 all bounties were withdrawn, and the grants ceased to be given. Therefore, during that period the amounts of bounties, improvements, and construction of piers or quays, grants to poor fishermen for repairs of boats, tackle, and new boats built, made up a gross total of 259,358*l.* 6*s.* 6½*d.*, and in this is included for salaries and travelling expenses to officials 68,132*l.* 12*s.* 6*d.*

Take, then, the return of the sums which were granted for the British fisheries. From 1809 to 1819 the amount was 327,282*l.* 9*s.* 6*d.*, and from 1819 to 1841, 955,438*l.* 14*s.* 6½*d.*, making a total for the whole period of 1,282,721*l.* 4*s.* 0½*d.*, being more than one million in excess of the sums granted to Ireland.

The bounties to the Scotch fisheries expired at the same period that they were withdrawn from Ireland, the 5th of April 1830; and although from that date all pecuniary encouragement ceased to the Irish fisheries, yet by a return moved for by Sir H. W. Barron, M.P., Waterford, it appears that Scotland had received in 10 years, from 1835 to 1844, a total of 143,791*l.*

The Scotch Fishery Board still continues to receive at the rate of upwards of 11,000*l.* per annum for the mere payment of salaries and allowances of the officials on the establishment, travelling and incidental expenses, and other items connected with the duties of branding, records of fish, superintendence, and protection of the fisheries, &c.

In addition to this annual grant, Scotland since 1830 has continued to the present time to charge the Parliamentary grant of 3,000*l.* per annum under the Act 5 Geo. 4, c. 64—2,500*l.* a year for piers and quays, and 500*l.* per annum for repairing the boats of poor fishermen.

The 9th section of that Act authorises the sum of 5,000*l.* per annum, Irish currency, for similar purposes in Ireland, namely, 4,500*l.* for piers or quays, and 500*l.* for providing materials for the repairs of poor fishermen's boats.

This has altogether ceased in Ireland, while the Board of Fisheries in Scotland is granted nearly 12,000*l.* a year, payable through the Board of Excise in obedience to warrants from the Right Honourable the Lords Commissioners of Her Majesty's Treasury.

It is not then to be wondered at that the fisheries of Ireland so rapidly declined in comparison with those of Scotland on the cessation of the bounties, and the withdrawal of all annual grants, or that the spirit of non-interference should be exercised on the part of the Irish Board of Works, to whom is confided the charge, when oppressed by other onerous duties, instead of organising a new Board for the purpose of a more active principle being exercised in carrying out the provisions of the Act of 5 & 6 Vict. c. 106.

But one solitary officer now remains to fulfil all those most arduous duties, and engagements in most important inquiries, whose remuneration, after a service of half a century, is but 600*l.* a year, and this sum, with travelling and other incidental expenses of office, under altogether 1,000*l.* a year, is all that is allocated for the carrying out and the superintendence of the fisheries of a country, which are of more importance than those of any other portion of the United Kingdom.

On the part of the Scotch fisheries it is maintained that the Act of 1808, 48 Geo. 3, c. 110, enabled the appointment of seven Commissioners specially to superintend the herring fishery of Scotland, in addition to the Board of Fisheries and Manufactures, which had previously existed in that country under the Act of 13 Geo. 1, c. 26, 29, & 30. Act, 1808.

The Act of 48 Geo. 3, c. 110, was made perpetual by a subsequent Act, 55 Geo. 3, c. 99, and which continued the Board of Fisheries, and its officials in Scotland, after all bounties had ceased; 3,000*l.* now annually drawn in Scotland under Act 5 Geo. 4, c. 64, was continued in lieu of the tonnage bounties for the deep-sea herring fishery.

The Act 5 & 6 Vict. clearly shows that so much of the Act of 59 Geo. 3, c. 109, and the 5 Geo. 4, c. 64, as regards the annual grant of 5,000*l.* per annum for piers and quays, and aiding poor fishermen, is still in force in Ireland.

	£.	s.	d.	
Thus 4,500*l.*, Irish currency, for piers and quays would be	4,153	16	11	British.
£.500 for aiding poor fishermen - -	„ 461	10	9	„

The Act of 1 Will. 4, c. 54, s. 8, does not appear to affect the main principle of the grants, but merely to a separate board for a special purpose sanctions 13,000*l.* to be allocated. 1 Will. 4, c. 54, s. 8.

	£.	s.	d.
Take, therefore, the annual grants from 1830 to 1865 (35 years), the total British money for piers and quays would be - - - - - - - - - - - -	145,734	12	1
For aiding poor fishermen - - - - - - - -	16,153	16	3
	161,888	8	4
Deduct the grant of 13,000*l.* made subsequent to 1830, and 4,123*l.* 13*s.* 4*d.* expended in 1846 for curing-stations advanced from the loan fund, and it will be found that the sum withdrawn from Ireland amounted to no less than -	17,123	13	11
	144,764	14	5

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	£.	s.	d.
While under the very same Act 3,000 *l.* per annum is still allocated to the Scotch fisheries, which from 1830 to the present time amounts to, for piers and quays, and aiding poor fishermen	105,000	–	–
Scotch Fishery Board, sundries	385,000	–	–
	£. 490,000	–	–

9 Vict. c. 3.
10 & 11 Vict. c. 75.

Although the Acts 9 Vict. c. 3, and 10 & 11 Vict. c. 75, allotted the sums of 50,000 *l.* and 40,000 *l.* ostensibly for the encouragement and improvement of the deep-sea fisheries, as a source of employment and food, by the construction of piers and harbours and other works, yet these loans were more generally sought for the purposes of general trade and the benefit of inland communication than for immediate utility for fishery advantages. These were expended partly by grant and partly by loan, in a manner the Commissioners considered best to recommend.

It has not been clearly shown in what manner the balance of 12,000 *l.* arising out of the pier and loan funds, transferred from the sums that were accumulated previous to 1830, has been absorbed.

The very great extent which the herring fisheries of the East Coast have attained during the summer and autumn fishing, the success chiefly attributable to the native fishermen being provided with larger boats and more extensive and deeper trains of nets, have enabled them to compete with the Cornish, Manx, and Scotch boats, and it is most gratifying to state that the conduct of the Irish fishermen has been most zealous and industrious.

The ready means of transit of the fresh fish to the English markets have kept up such favourable prices that, notwithstanding the enormous success of the herring fishery, the demand has been as yet more than equal to the supply. This has turned the attention of the Skerries men, who hitherto employed their craft as carriers and coasters, to the herring fishing, and the number of boats fitting out at Howth, Balbriggan, Skerries, Greystones, and other places along the coast is such, that the continued increase must in time greatly lower the sales, so that some useful system of curing should be established. Even last season, during a very large take, prices were reduced to 10*s.*, 15*s.*, and 20*s.* per maize. Ungutted fish were packed in barrels and sent to Liverpool, while others were purchased, gutted and transmitted to Glasgow, where they were again repacked and sent to other markets, many finding again a ready sale in Ireland. Indeed, this has already been noticed in the Report of the Commissioners of Irish Fisheries for 1853, at page 4.

The superiority of the East Coast herrings of Ireland over those of Caithness, and the great superiority of the winter fish on the West Coast, has been long known. This may, in time, lead to the accomplishment of those recommendations made in the 19th Annual Report of the Commissioners of Public Works (Ireland), at page 67, under the head "Fisheries."

"The increased facilities afforded by railways as they extend, and steam navigation, are, as we anticipated, improving the fresh fish markets, and we look forward with great interest to the results which the opening of the railway to the West Coast of Ireland will produce in this respect; when by its means a central and remunerative market shall have been established at Galway, we have little doubt that, in the natural course of trade, improved boats and modes of fishing will be adopted throughout a great extent of the Western Coast; and the efforts to supply a fresh-fish market will soon produce a surplus, which will create a demand for the energies, skill, and capital of the curer."

Valuable fisheries are but partially developed. The abundance and superiority of the summer and winter herrings, the finest ling, cod, and tusk, besides all the more luxurious kinds, as turbot, soles, dory, and haddock, are unequalled. But the capture of these requires large and superior class boats and gear to command a certainty of success and profit. And here lies the evil of the Irish fisheries, the poverty of the fishermen. In every town around the coasts of Ireland the winter and Lent supplies are Scotch cured herrings, Shetland ling, and Newfoundland cod, while abundance of those fish are on their own shores.

Some idea may be formed when, from the returns of an eminent factor, 76,500 barrels of Scotch cured herrings were imported to Ireland this last season, besides a large quantity in bulk, and about 850 tons of dried ling and cod. For the last 10 years the market prices have been progressively advancing. In 1850 ling sold for 15 *l.* and 18 *l.* per ton; Scotch herrings, 16*s.* to 22*s.* per barrel. During the Lent of 1865 the wholesale prices of ling were 30 *l.* to 32 *l.* per ton; Scotch herrings, from 29*s.* to 36*s.* per barrel. The Dublin market notes of 25th March 1865 state that for years there has not been such a demand for salt fish; the stocks of ling have been all run out, and this during Lent is unusual—"Irish Times," 25th March 1865. Such demands brought to market large supplies of Norway herrings and Newfoundland cod. The "Daily Express" states, "Dublin Markets, 25th March 1865.—There has been no ling in market, a circumstance that we do not remember during Lent; in consequence, small Newfoundland cod have been sent from Glasgow." So great has been the enterprise of the Howth fishermen, that four fine boats have been fishing during Lent and the present season off the South Coast for mackerel, at distances of 30 and 40 miles from the land, and there again a ready sale is found for the fresh fish through English buyers.

The

The sad state of the Irish fisheries being thus pointed out, it is natural to ask what are the means to be suggested for their relief.

To establish curing-houses at certain stations where fish are abundant off the coast will be equally liable to failure as those formed in 1846. To seek the means of obtaining a better market, and better prices for cured fish, through the means of an official brand, would at present be equally useless, so long as at the only stations where superior class boats are fitted out the demand for the fresh fish is always equal to the supply.

I cannot avoid quoting the sensible observation made by James Redmund Barry, Esq., so far back as 1821, when Inspector General of Fisheries, South District, in his Report to the Commissioners of Fisheries; "Before the fish can be produced for bounty, it must be taken, and before the fish is taken the boat must be built, therefore if the means of building the boat do not exist, the bounty cannot be earned," quite on the principle of first catch your hare.

Such then, as the description given of the condition of the Irish Fisheries by the Commissioners, in their Report for 1823, is their present state. They observe, "The energies of many thousands of the coast population of Ireland have still continued in the same state of inactivity in which the present enactments found them, and that were it not for the impulse given to a numerous and wretched coast population, by the bounties granted under the present fishery enactments, the value of the Irish fisheries might have yet remained in obscurity."

The withdrawal of all encouragement to the Irish deep sea and coast fisheries since 1830 has placed the fishermen generally around the coasts of Ireland in the same wretched condition just described.

Although the bounty system ceased at the same time in Scotland, yet the continuance of a Fishery Board, with official inspectors, and a Government brand, was a great gain to Scotland, to the destruction of the Irish fisheries.

The best remedial principles to be considered are—

1st. The formation and repairs of piers, and breakwaters and small harbour lights.

2d. The establishment of a general fishery loan fund.

3d. The formation of a Board of Directors with official inspectors, authorised to give the Government brand.

4th. The selection at each station of the most experienced and best-conducted fishermen and boys, to form a naval reserve, and affording to those most deserving some distingi shing badge of merit.

As the Commissioners of Public Works did not deem it desirable to revive the grant of 5,000 *l.* per annum, chiefly in consequence of the onerous duties that might be placed upon them in its appropriation, left the condition of the fishermen to decline each year, while Scotland with its staff of inspectors, proved the utility of such encouragement, by the beneficial results to the fishermen, as both men and boats exhibited an increase after the cessation of the bounties.

1st. The formation of fishery piers or quays requires some consideration. There are many little fishing communities around the coasts of Ireland, where splendid fishing-grounds exist, but where, from the nature of the coast, no shelter is afforded to any class of boat, but to light yawls, and to canoes or curraghs, that are easily beached; small piers and breakwaters in such localities are highly necessary, and wherever depth of water exists sufficient for sailing-boats, a pier or safety quay should be erected in such positions, that neither prevailing winds nor silting might affect the safety or utility of the position. Such stations are not always applicable to trading purposes, and they should be carefully selected, but not at the instance of interested individuals or proprietors. Small harbour lights are required at such stations, as Boffin, and at all similar localities, especially where a flourishing herring fishery could be established. It is not unreasonable to expect that some such application of the public funds should be allocated, particularly when the very long period of years during which the annual grant has ceased to Ireland is considered, and when, for similar purposes, it is still continued to be drawn by Scotland.

2d. The establishment of a general fishery loan fund will be found to be one of the best principles for promoting the fisheries, and encouraging the industry of the fishermen.

It has been found that the fishermen, when thrown upon their own industrial exertions, and money has been advanced to them, repayable by instalments, have invariably been honest and punctual in their engagements. This has been remarkably shown in the case of the "trustees for bettering the condition of the poor of Ireland."

The form of application I now hand in shows that the moneys advanced are appropriated to the improvement of the coast fisheries of Ireland, and to the manufacture of frieze, linsey woolsey, coarse linen, and other articles required for the use of the peasantry. Also for making and repairing of wheels, keels, looms, and for procuring hemp, flax, or wool. The capital or fund of the trustees amounts to about 30,000 *l.*, and was made up from the residue of moneys remaining out of unappropriated subscriptions in the hands of the Committee of Management, appointed on the 16th May 1822, for the relief of the distressed and starving peasantry of Ireland. The Committee having appropriated to those objects sums to the fullest extent that were required, handed over a sum of 8,000 *l.* to trustees, under

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certain limitations. A further sum of 5,000*l.* was munificently contributed for the same object by the London Relief Committee, which sums were vested in Government Securities, the interest only to be made applicable for the loans to be advanced.

Further contributions and subscriptions, as well as the interest of the sums invested, had increased the moneys in the hands of the trustees, so as to enable them to purchase 9,300*l.* in 3 per cent. consols. Both principal and interest of the latter sum have been made available for giving very extensive assistance.

The application for loans is made to the trustees, and on being strictly investigated as to their utility, their proper appropriation, and the securities approved of, the amounts sought are at once paid on the completion of the bonds. These bonds are usually made payable in seven half-yearly instalments (except on very small loans), the first instalment payable about 12 months from the date of the bond. No interest is chargeable, and such accommodation must have been of infinite assistance when it is taken into consideration that bank discounts have ranged from 5 to 7 and 8 per cent.

During the last 10 years upwards of 15,000*l.* has been thus lent out, and which have been the means of extending the fishery very much along the east coast, by providing for the fishermen a larger class of boat, and superior nets, tackling, and gear. This is also strikingly shown on parts of the south, and the west coasts.

For that period not a single loss has occurred to the trustees, nor any failure of importance in the punctual repayment of the instalments. It has further been the means, in many instances, of enabling the fishermen to make such profits in their pursuits as to clear off the loan, and leave to them unencumbered possession of their boats and fishing gear.

A sum, therefore, advanced out of the public funds, and placed under the control of a proper board of direction, to aid in a similar manner, and to promote such objects, must of necessity greatly extend the Coast Fisheries of Ireland, and develope that wealth the existence of which has been for years so much sounded forth, *vox et preterea nihil.*

It should be imperative on the coast proprietors, especially absentee landlords, by security or otherwise, to aid such exertions, for the relief and the promotion of the industry of the coast population.

This, thirdly, would lead to the appointment of experienced official inspectors in such positions on the coast of Ireland, where the capabilities of the fisheries have been well tested, and where the establishment of curing-houses would then largely tend to the certain development of the resources of a country that have so long lain dormant, and eventually place it in a position to relieve itself of the large imports that are now annually made from Scotland and from other countries. Such stations as Killybegs, Killalla, Galway, Dingle, and Bantry, where both a summer and a winter herring fishery could with certainty be enormously carried on, if a superior class of boat and nets, in the first instance, were found for the fishermen. The herrings do not remove from the parts of the coast they frequent to spawn, and to which they are peculiar. The supposed capriciousness of the fishery is entirely owing to the want of a class of boat of sufficient tonnage to seek the fish in the early part of each season of the fishery in the deep water off the coast. The success of the Cornish and Scotch, as well as the Manx boats, is chiefly owing to the superiority of their nets, the length and depth of each train. This is strikingly seen in the pursuit of our mackerel fishing, when the boats from Howth and Kinsale have to seek the fish at ranges of 30 or 40 miles from the land, and as far westerly as Cape Clear.

The superiority of the herring is in its fulness and flavour. Those of Arklow and Howth are equal in quality to those of Loch Fyne, which bring the highest price in Scotland. The Killybegs and Galway herrings are finer than those of Caithness or of the Orkneys.

Were stations to be established, in the manner that I have proposed, the next important step would be the granting to Ireland the Government official brand.

At such stations as Howth, and at Kinsale, where there at present exist such enormous demands for fresh fish, and for the English markets, and where the means of transit afford such facilities, the brand is not at present of that importance, but at the more remote districts of the west its value to our fisheries would be great. No matter how superior the quality of the fish, or the goodness of cure, without the official brand foreign markets will not purchase the unbranded fish.

Branding is considered of the greatest importance in maintaining the character of the British fisheries, and is so considered by the Fishery Officers of Scotland.

Then why limit such an advantage to Scotland, and withhold from Ireland these means of stimulating her industry?

The Returns of the Herring Fishery of Scotland for 1863 show a total of 276,880½ barrels branded; for 1862, 346,712 barrels branded. Between 70,000 and 80,000 barrels are annually exported to Ireland.

4thly. The providing of superior means of carrying on the fisheries at those stations that I have enumerated must greatly advance the character of the fishermen as seamen and pilots. Some few years since there was a hardy race of fishermen at Dingle, but whose cumbersome sprit boats enabled them only to fish within the precincts of their bay. Encouragement and assistance given to them in procuring larger boats have now formed them into able seamen and good pilots, and made them more experienced in the fisheries. So important has been this change that during the last year nearly 80 able young men have, from Dingle, been serving on board Her Majesty's training-ship, the "Hawk," at Queenstown, for

for the Naval Reserve. Some distinguishing badge of merit should be awarded to the best-conducted and most experienced of the men as seamen and pilots.

In conclusion, I cannot advance points more strongly bearing upon these representations than the following extract from the Report of the Irish Fishery Commissioners for 1827:—

"The Commissioners are induced to believe that in submitting the foregoing statement to the Government, they exhibit an interesting and pretty accurate account of the wants of the poorest (but most numerous) class of fishermen, of their disposition to avail themselves of any assistance, however small, that would aid them in the prosecution of an industrious occupation, and of the obvious necessity of encouraging that disposition by occasional aid from other resources than what their own slender and inadequate means would afford. Besides, whatever be the institution that tends to promote industrious habits, it must necessarily produce advantages; and in a country like Ireland, labouring under the burthen of a dense and poor population, that institution which tends in any degree to produce those advantages becomes a fair subject for national consideration and legislative encouragement."

The improvement of Ireland, therefore, is of the deepest importance to every part of the United Kingdom, and, as Sir Wm. Temple long ago stated, under good Government she might be made "one of the richest countries in Europe, and a mighty increase both of strength and revenue to the Crown of England."

(signed) *Wm. Andrews,*
Trustee "for bettering the Condition of the Poor of Ireland,"
in Aid of Coast Fisheries.

Forms of Applications for Loans.

(No. 1.)

Trustees for Bettering the Condition of the Poor of Ireland.

Coast Fisheries.

We, the undersigned, inhabitants of the parish of , barony of , and county of , have been engaged in the fishing business for years, and have embarked capital for said purpose, to the amount of pounds sterling. The operations of our fishing association extend from to , and embrace the harbours of ; and the number of families deriving immediate benefit from our labours is , consisting of individuals.

Being in need of some assistance at this time, to enable us more efficiently to prosecute our fishing employments, we respectfully entreat a loan of pounds sterling from the Trustees for Bettering the Condition of the Poor of Ireland. We solemnly and sincerely declare, that the sum hereby sought as a loan, or such portion of it as the trustees shall see fit to grant, together with pounds sterling in our hands, in cash, for that purpose shall be applied solely for the construction or repairing of fishing-boats, or providing hemp, flax, or twine, for the making of cordage or nets, the procuring hooks, lines, tackle, and other implements used in fishing, or for the curing of fish for home consumption.

We propose as our Securities , of , in the parish of , barony of , and county of , being by trade or profession ; and , of , in the parish of , barony of , and county of , being by trade or profession ; and we certify that the persons so named as our securities are not to derive any personal benefit or consideration from the working of this association, or by becoming securities for the undersigned.

We refer the trustees for the character of all the parties concerned in this application, and for their solvency, as well as that of securities named, to , of , in the parish of , barony of , county of , and post-town .

App. No. 3.

We are willing to enter into a bond, under such conditions as the trustees may determine on, for the repayment of the loan for which we now apply, and we engage to return a faithful and detailed account of our expenditure—of the quantity of fish taken—and to afford such other information as the trustees may from time to time think it requisite to call for.

We depute , of , post-town of , as the person to whom communications for us may be addressed.

	Names of Applicants.	Residence and Occupation.
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

We, the undersigned, agree to join the persons above named in such bond as the Trustees for Bettering the Condition of the Poor of Ireland may determine on; and we do solemnly and sincerely declare that we are not to derive any benefit or consideration by becoming securities for the money hereby sought, and we conscientiously believe the statements in the foregoing application to be strictly true.

Names of Securities.	Residence.	Occupation.

I have known for years the several persons named in the foregoing application, with the exception of Nos. . They are persons whom I conscientiously believe to be sober, respectable, honest, and industrious, and sufficient security for pounds sterling, being the amount of their present application.

I am also acquainted with the persons named by the applicants as their securities; they are sober, respectable, honest, and industrious persons, and fully sufficient security for the loan hereby sought.

I conscientiously believe the statements in the foregoing application to be strictly true.

(signed)

Dated the day of 18 .

App. No. 3.

(No. 2.)

TRUSTEES for Bettering the Condition of the Poor of Ireland.

WE find that opportunities present themselves for aiding parties engaged in the "manufacture of frieze, linsey woolsey, coarse linen, and other articles required for the use of the peasantry;" we therefore apply for assistance from the Trustees for Bettering the Condition of the Poor, to the extent of pounds sterling, to enable us to grant loans for making or repairing wheels, reels, looms, &c., also for procuring hemp, flax, or wool.

We undertake that the amount applied for, or such portion of the same as the trustees shall see fit to grant, shall be lent only for the objects above specified. We agree to repay the amount of this loan by such instalments as the trustees may determine on, and to furnish an account made up to the 31st December in each year of the progress of our work.

We propose as Securities for this Loan:—

1 _____ of _____

2 _____ of _____

3 _____ of _____

4 _____ of _____

Signed, .

Residence, .

Post-town, .

Dated this of 18 .

Appendix, No. 4.

PAPERS received from the Treasury, and laid before the Committee by the Chairman.

App. No. 4.

CORRESPONDENCE, &c., relating to the Irish Fisheries.

The Secretary to the Commissioners of Public Works to Mr. *G. A. Hamilton.*

Office of Public Works, Dublin,
Sir, 5 May 1865.

I am directed by the Commissioners of Public Works to bring under the notice of the Lords Commissioners of Her Majesty's Treasury the enclosed evidence on the Irish Fisheries, taken by the Select Committee of the House of Commons on Irish Taxation. The Commissioners consider that this evidence should not be published unexplained, and direct me to enclose, for their Lordships' information, the accompanying statement, setting forth the facts of the case, with a request that they may be pleased to forward it to the Committee, with a view of its being published with the evidence taken on the Irish Fisheries.

† 1 Will. 4, c. 54.

I have, &c.
(signed) *E. Hornsby,*
Secretary.

Geo. A. Hamilton, Esq.,
&c. &c. &c.
Treasury, London.

‡ 1st, 2d, and 3d.

Fisheries (Ireland).

The Act 59 Geo. 3, c. 109 (1820), confirmed by Act 5 Geo. 4, c. 64 (1824), authorised the issue of 5,000 *l.* Irish currency per annum (4,615 *l.* 7 *s.* 8 *d.* British) to the Commissioners of Irish Fisheries, for the purposes of erecting and repairing piers, and to make advances to poor fishermen for boats, tackle and fishing-gear. Under these Acts, 40,062 *l.*, British, was issued from the Exchequer.

This fund was supplemented by contributions from charitable societies, counties, and individuals, in aid of piers, and by the repayments of fishermen, &c., in aid of further advances.

Of this 5,000 *l.*, Irish, 500 *l.* was supposed to go to the Loan Fund for Fishermen, and the remainder to Piers.

£. 37,596 *l.* was advanced to fishermen between 1821 and 1830 (of which about 23,900 *l.* was repaid, leaving a loss, after allowing for sums given in aid, of about 12,000 *l.*) When these advances ceased, by order of the Lord Lieutenant, dated 4th August 1830, grounded on an Act passed 16th July 1830, 1 Will. 4, c. 54 (herewith*), which in the 8th section limits the further issues for fisheries during the five succeeding years to a total sum of 13,000 *l.*, and directs that the several annual grants making this sum should be applied only to the completion of any piers which should have been commenced before the 5th April 1830, or in relation to the repayments of any loans made and lent before the 5th of April 1830, thus virtually repealing all further advances to fishermen.

The payment of bounties also ceased by the same Act under which payments had been made through the Customs, amounting to 163,376 *l.*

The same Act† transferred the duties connected with the Fisheries to the Directors General of Inland Navigation (16th July 1830), the limited duties of the fisheries no longer requiring a separate Board; and in the subsequent year, October 1831, these duties were again transferred from the Directors General of Inland Navigation to the Board of Works, constituted under Act 1 & 2 Will. 4, c. 33, 15th October 1831.

It thus appears that the advances to fishermen ceased with the existence of the Fishery Commissioners in July 1830, and that the Board of Works was never authorised or had ever any means at its disposal to make such advances, but confined itself, as shown in several annual reports to Parliament,‡ to the recovery of some of the outstanding debts, but in consideration of the necessitous state of many of the borrowers, these claims were never pressed by legal proceedings.

The Legislature again took the Irish Fisheries into consideration in 1846, and sanctioned a grant of 50,000 *l.* by Act 9 Vict. c. 3 (Piers and Harbours), and again in 1847, a subsequent grant of 40,000 *l.* (10 & 11 Vict. c. 75), making 90,000 *l.*, for the erection of piers, under which no grant for any pier could exceed 5,000 *l.*, and the amount of grant in no case to exceed threef-ourths of the total cost. In connection with these last Acts, loans and contributions in aid were made, amounting from 50,000 *l.* to 55,000 *l.*, by counties and individuals.

There is also an annual sum voted to defray salary of Fishery Commissioner, and the incidental expenses in carrying out the Fishery Acts.

E. Hornsby, Secretary.

Mr. *H. Townsend* to Mr. *W. Gregory.*

Irish Fishery Office,
Sir, 17 July 1830.

The Commissioners of Fisheries have had this day under consideration a Bill, entitled "A Bill entitled to revive, continue, and amend the several Acts relating to the Fisheries," the principal object of

* *See* also letters of Fishery Board, 17th July 1830; 29th July 1830.

of which is to transfer all the powers of the present Commissioners to the Directors General of Inland Navigation, under whose control and management the piers already commenced are to be completed, and the loans already advanced are to be collected.

The Commissioners are unable to ascertain satisfactorily whether it is intended by the proposed Act, that the Fishery Loan Fund (now in full operation) shall be forthwith discontinued, and whether any further application for new piers shall be acted upon.

The Commissioners are, however, greatly apprehensive that an immediate discontinuance of the Loan Fund would be attended with very injurious consequences to the poor maritime population, and would even place the outstanding loans (consequently the fund itself) in imminent hazard of being collected; and as they entertain a doubt on the construction of the proposed enactment, they hesitate to order the sudden suspension of the fund until the intentions of the Legislature shall be distinctly ascertained, and the instructions of the Government transmitted to them.

The Commissioners feel most anxious, in the event of the proposed Bill passing into a law, to hand over the trusts reposed in them to the Directors General of Inland Navigation, in a way at once creditable to themselves, and satisfactory to that department; but in order to effect that object, it would be highly important that they should be favoured with the earliest instruction of Government on those essential points, namely, whether they are to forthwith discontinue any further loans to poor fishermen, and whether they are also to discontinue any further grants for new piers, even though the strength of their present funds may admit of their selecting two or three from the many undisposed of applications on their list.

The Commissioners are also unable to satisfactorily ascertain from the Bill in question, how far it may, or may not, be expedient for them to retain or surrender their present house in Gardiner-street, where the head office and meetings of the Commissioners are held. Should the contemplated Act render it inexpedient to retain it, the Commissioners would take such measures as may be necessary to its discontinuance.

I have, &c.
(signed) *H. Townsend.*

William Gregory, Esq.,
Dublin Castle.

Mr. *H. Townsend* to Mr. *W. Gregory.*

Irish Fishery Office,
29 July 1830.

Sir,

The Commissioners of Fisheries have been waiting with much anxiety for the instructions solicited in my letter of the 17th instant, and trust it may by this time be in your power to remove the embarrassments under which they labour, by communicating to them the pleasure of the Government as to those points on which they requested instructions. The Commissioners understand that the New Fishery Enactment has received the Royal Assent, but not having received any official notification thereof, they are apprehensive that they may at this moment be illegally exercising those functions, which are now transferred by that enactment to another and a different department. The salaries, incidental demands, and a considerable portion of bounties due prior to the 5th April, have remained unpaid; the Commissioners of Customs, upon whom warrants were drawn as heretofore, having, as this Board understand, withheld the payment, awaiting instructions from the Lords of the Treasury. The Commissioners of Fisheries are, moreover, unable to give any satisfactory reply to the inquiries of those officers whose salaries and incidental claims have been left so long unpaid, and who from pecuniary distress may be induced to apply the public money, which must unavoidably pass through their hands, to the relief of personal wants. App. No. 4.

Under these circumstances the Commissioners have again to solicit your kind attention to the necessity of communicating to them the instructions of the Government, as requested in my letter of the 17th instant, and they desire me at the same time to observe to you, that the Irish Fishery Loan Fund is at this moment in active operation, and the orders of the different traders for payment of their demands for fishery materials are every day arriving at this office.

I have, &c.
(signed) *H. Townsend.*

William Gregory, Esq.,
Dublin Castle.

Mr. *W. Gregory* to the Commissioners of Fisheries.

Dublin Castle, 4 August 1830.

My Lords and Gentlemen,

Having submitted to the Lord Lieutenant your secretary's letters of the 17th and 29th ultimo, respecting the Act* passed in the last session, entitled, "An Act to revive, continue, and amend several Acts relating to the Fisheries," I am directed by his Grace to acquaint you that a copy of the Act alluded to was not received until the 31st ultimo.

* 1 Will. 4, c. 54.

By the 6th section of that Act, the powers granted to your Board by the 59th Geo. 3, c. 109, are vested in the Directors General of Inland Navigation.† I am therefore to signify his Grace's desire that you will make the necessary preparations for transferring the control and management of the piers, as well those which are completed as those which are in progress, to that Board, and also the books and other documents belonging to the department.

† 1 & 2 Will. 4, c. 33, s. 106, to Board of Works.

His Grace further desires that you will give immediate directions to your officers to suspend their proceedings with respect to the Loan Fund; and that they will not incur any further travelling expenses whatsoever.

You are also to take measures for reducing your establishment, and for surrendering the house, which has been occupied by you as an office and gardens.

A communication has already been made to the Lords Commissioners of his Majesty's Treasury respecting the necessity of instructions being given to the custom officers for the payments of the warrants already issued by you, and I am to acquaint you that a further communication will be made to their Lordships on the subject.

I am, &c.
(signed) *W. Gregory.*

Commissioners of Fisheries.

App. No. 4.

Mr. *H. Townsend* to the Directors General of Inland Navigation.

Irish Fishery Office,
5 August 1830.

Gentlemen,

I HAVE the honour to transmit you herewith the copy of a letter from William Gregory, Esq., of the 4th instant, conveying the commands of his Grace the Lord Lieutenant, that the necessary preparations should be made for transferring the control and management of the fishery piers to your Board; and also the books and other documents belonging to this department.

May I therefore request you will have the goodness to communicate to me your pleasure on this occasion; as also, when it may be your convenience to receive the books and other documents which appertain to this establishment?

I further have to observe that his Grace's commands respecting the suspension of the Loan Fund, as well as prohibiting any further expense on the score of travelling, have been communicated to the officers of fisheries in a letter of this date.

It only remains for me to add that if there are any other points in Mr. Gregory's letter on which you may consider it expedient to require assistance from me, I shall feel happy in paying immediate attention to your wishes.

I have, &c.
H. Townsend.

To the Directors General
of Inland Navigation,
&c. &c. &c.
Merrion-street.

CIRCULAR to General and Local Inspectors.

LOAN FUND.

[Discontinuance of any further Orders.]

Irish Fishery Office,
29 July 1830.

Sir,

I AM directed to acquaint you that no more orders on the Loan Fund for either repairs, supplies, or new boats, are to be issued by you after the 2d of August next, at which time, if not before, it is presumed this letter will reach your office.

You are, however, to consider this prohibition but as a temporary suspension of the Fund, which present circumstances render necessary, but whenever it shall be deemed expedient hereafter to recommence, or re-open the Fund, instructions will be issued to that effect, but until then no further orders on the Fund are to be given to the fishermen on any account.

You are further required to transmit me, without delay, a return of all the orders issued by you since the 5th of April last, for repairs and supplies, stating the number of the form, name of the fisherman, names of the sureties, name of the shopkeeper, date of the order, in the 7th section of the form, and amount of the order, in said section; a sketch of the return required you wil find annexed hereto.

You are also to transmit me at the same time a similar return of all the promissory notes passed for new boats since the 5th of April last, stating the number of the form, name of the fisherman, names of the sureties, date of promissory note, and amount of said note; a sketch of the return required you will find annexed hereto.

You will please to take care and be prepared when called on (which may be almost immediately after this), to have your bill books as well as all the outstanding promissory notes in your possession ready for inspection, whether that inspection shall be made in the office of your district or in Dublin, as either place shall be deemed most eligible; and it is expected that whenever such inspection takes place, the whole of the documents above mentioned will be found to have been kept with the nicest regularity and precision.

I am, &c.

To ,
Inspector of Fisheries,
District of .

REPAIRS AND SUPPLIES.

A RETURN of all the Orders issued by the INSPECTOR of FISHERIES, in the District of , from the 5th of April 1830 to the of August following, for Repairs and Supplies of poor Fishermen's Boats, pursuant to the Board's Order, as conveyed in their Circular of the 29th July 1830.

Number of Form.	Name of Fisherman.	Name of Surety.	Name of Surety.	Name of Shopkeeper on whom the Order was given in Section 7 of the Form.	Date of Order in the 7th Section of the Form.	Amount of Order in the 7th Section of the Form.

NEW BOATS.

A RETURN of all the PROMISSORY NOTES passed for New Boats, by the poor Fishermen in the District of , from the 5th of April 1830 to the of August following, pursuant to the Board's Order of the 29th July 1830, as conveyed in their Circular of that date.

Number of Form.	Name of Fisherman.	Name of Surety.	Name of Surety.	Date of Promissory Note.	Amount of Note.

App. No. 4.

The Directors General of Inland Navigation to his Grace the Lord Lieutenant.

Navigation Office, 9 August 1830.

May it please your Grace,

We have received a letter from Henry Townsend, Esq., Secretary to the Commissioners of Irish Fisheries, enclosing a copy of one addressed to the Commissioners by William Gregory, Esq., dated the 4th instant, which conveyed your Grace's instruction for the transfer to this Board of the piers completed or in progress, as well as other matters of arrangement, with a view to carry into effect the Provisions of an Act passed in the last Session of Parliament.

Circular Orders have been dispatched by Mr. Townsend to all the officers, suspending the issue of new loans, and directing them not to incur expenses for travelling. Steps have been taken for giving up the house in which the business of the Fishery Department has been heretofore transacted; the rent, however, for the quarter to the 5th of October, must necessarily be paid, and in the intervening time the books and documents can be removed to our office with greater ease and regularity.

In consequence of your Grace's commands, a letter has been addressed by Mr. Townsend to the four Inspectors General, requiring their opinion as to the number of local officers which may be adequate to the collection of the outstanding loans; and as soon as we have made ourselves thoroughly acquainted with the details of the new duties which have devolved upon us with reference to the establishment which may be necessary for their due execution, we shall report thereon for your Grace's information.

In the meantime, we beg to call your Grace's attention to the last clause in the Act, which requires that an unpaid Commissioner should be constantly present, to enable us to exercise our powers and authorities; we are not aware that any such Commissioner has been appointed by your Grace; neither are we of opinion that in the event of such appointment, the attendance of such Commissioner could be reckoned on so as to ensure a regular and prompt dispatch of business; we therefore feel it necessary to apply to your Grace for instructions as to our proceedings under the circumstances.

On the day after the receipt of Mr. Townsend's letter we proceeded to the Fishery Office, where we investigated the nature of the business of the department, and ascertained by conference with that gentleman that several matters of a pecuniary nature at present await the sanction of a Board. It will therefore be desirable that some arrangement should be made with as little delay as possible to remove the existing impediment to the public business.

We have, &c.
(signed) *James Saurin.*
J. Armit.
Henry R. Paine.

Letter from Mr. *G. A. Hamilton* to the Chairman of the Committee.

Sir, Treasury Chambers, 15 June 1865.

With reference to my letter of the 6th May last, enclosing a statement in explanation of evidence on Irish Fisheries taken before the Committee on Irish Taxation, I am directed by the Lords Commissioners of Her Majesty's Treasury to state to you that, on re-perusal, they find that some of the facts set forth in that statement are not strictly correct.

Their Lordships are anxious that the information furnished to the Committee should be in all respects reliable, and they desire me to forward to you the enclosed corrected statement, in the hope that the Committee will see fit to substitute it for that now before them.

I am, &c.
(signed) *George A. Hamilton.*

Colonel Dunne, M.P., Chairman of the Committee on Irish Taxation.

Fisheries.

Authorised the Lord Lieutenant to place at the disposal of the then Fishery Commissioners any sum not exceeding 5,000 *l.* per annum, to be applied in the encouragement of the Coast Fisheries, subject to the regulations the Commissioners might make for the purpose. 59 Geo. 3, c. 109, s. 66. 1819.

This Act was only for five years from the passing and until the end of the then next Session of Parliament, that is to say, until the end of the Session of 1825. One year before the expiration of that Act, viz., 17th June 1824, the Act in margin was passed; and section 19 directs that the sum of 5,000 *l.* per annum should be applied and employed in building and making piers, and not for any other purpose whatsoever, except only in providing materials for the repair of boats of poor fishermen at those piers, not exceeding 500 *l.* per annum for this latter object. 5 Geo. 4, c. 64.

By the 7 Geo. 4, c. 34, passed on the 8th May 1826, all clauses and provisions, regulations, matters, and things, and all powers and authorities given by the 59 Geo. 3, and

App. No. 4.

the other Acts therein mentioned, were revived and continued from the end of the then last Session of Parliament until 5th April 1830.

Provides for the recovery of the promissory notes given by poor fishermen.

10 Geo. 4, c. 33, s. 1.

Authorises the Commissioners, so far as the extent of the funds vested in them for the encouragement of the Fisheries would admit, to enter into contracts for the erection of any piers, or for the advance or repayment of any loans under the Acts therein recited (59 Geo. 3, and 5 Geo. 4), although the time necessary for the completion of such works, or for the repayment of such loans, might extend to a period beyond the 5th April 1830, anything in the said Act, or any, or in any other Act or Acts relating to the Fisheries, or to the duration of the several Acts to the contrary in anywise notwithstanding.

s. 10.

Thus it will be seen that the Act of 59 Geo. 3 expired at the end of the Session of the year 1825, and in the following year was revived from the year previous until the 5th April 1830, when both the original Act of 59 Geo. 3, and the continuing Acts, all came to an end, and the Lord Lieutenant ceased to have power to issue any money whatever thereunder.

1 Will. 4, c. 54, s 8.

Three months later, viz., 16th July 1830, the Act in margin was passed, and by that a new fund was created, but applicable to piers only, and the Lord Lieutenant was authorised to issue for five years, viz. :—

	£.
1st year - - - - - - - - -	4,500
2d „ - - - - - - - - -	3,500
3d „ - - - - - - - - -	2,500
4th „ - - - - - - - - -	1,500
5th „ - - - - - - - - -	1,000
Making in all - - -	£. 13,000

to be applied in completing piers commenced before 5th April 1830, and in paying the officers employed, and also the expenses incurred in relation to any loans made prior t 5th April 1830.

s. 9.

The Directors General were appointed to carry out this Act, and the Board of Works were subsequently authorised to act in place of the Directors General.

1 & 2 Will. 4, c. 33.

It will be seen from the foregoing that it is an error in stating that either the Board of Public Works, or any other department, had any funds available for fishery purposes except the sums limited for five years by the Act of 1 Will. 4, c. 54, and applicable only to the completion of piers commenced before the 5th April 1830, when the funds applicable under the 59 Geo. 3, and other Acts, ceased.

Reports, 1833, 1834, 1835.

See 1st, 2d, and 3d Reports of the Commissioners of Public Works, in which the whole facts are laid before Parliament.

(signed) *Alexander Stewart.*

Office of Public Works, Dublin,
25 May 1865.

Appendix, No. 5.

PAPER handed in by the Chairman. App. No. 5.

Note.—This Paper is permitted by the Chairman to appear in the Appendix, in order to allow Mr. Fisher an opportunity of explaining his statements, which have been controverted by the Financial Officers of the Government. But as Mr. Fisher's letter contains strong charges against the Financial Officers, he deems it to be just that they should also be permitted to append any notes in explanation.

LETTER from Mr. *Joseph Fisher* to the Chairman of the Committee.

Sir, Waterford, 31 March 1865.

I SHOULD be wanting in respect for the Committee on Irish Taxation, before which I was examined last year, and deficient in regard to my own character, if I did not request you to lay before the Committee the following remarks with reference to that portion of my evidence which (after I had left London) was assailed by the officials of the Treasury, by exposing what they fancied were inaccuracies in some of my statements (*a*).

The papers handed in by the Treasury, which appear in the Appendix, give a general support to my evidence, and sustain the statement that Ireland was greatly overcharged between 1801 and 1817.

Those of which I complain appear, pp. 387, 388; they are intended as a reply to the accounts I furnished, which appear, pp. 323, 324. pp. 387, 388. pp. 323, 324.

My first complaint is, that the Treasury account is a misrepresentation. I did not propose to give "receipts and disbursements." The words I used were, "charge and discharge." The charge comprises two items, "sums voted" and "Interest and Sinking Fund." If the Treasury meant to answer my paper, it should have shown its inaccuracy. This they avoid; and instead of giving the "sums voted," they supply a column of alleged payments (*b*).

The Treasury accounts, pp. 387, 388, are principally abstracts in a different form of those given, pp. 390–393 (*c*). pp. 387, 388. pp. 390. 393.

The

NOTES by Mr. *Chisholm*, Chief Clerk of the Exchequer.

(*a*) Mr. Fisher here refers to the two accounts in the Appendix of 1864, pp. 387–8. These were prepared at the request of a Member of the Committee, and in the form approved by him.

(*b*) Mr. Fisher's paper was headed "Statement of the Amount of Income and Expenditure." It purported to give the amounts of "Total Charge" and "Total Discharge," after deducting the Ante-Union Debt, and the "Deficiency." The official accounts, pp. 387–8, merely exhibit the actual amounts of receipts into and issues from the Exchequer, as contained in the Finance Accounts, which constitute the Total Charge and Total Discharge; and these actual sums are shown in comparison with Mr. Fisher's assumed sums.

(*c*) These two sets of accounts are, in fact, wholly different. The accounts at pages 387–8 give the actual *net* amount of revenue *applicable to the actual expenditure* in each year, deducting from such revenue the charges of management and of Ante-Union Debt, but including in the revenue of Great Britain the repayments by Ireland in liquidation of the balance due on the joint expenditure account. The accounts at page 392 show the total *gross* revenue, including the charges of management and payments out of revenue in progress to the Exchequer, *applicable to the proportionate expenditure of each country, as finally settled;* for this object, the repayments by Ireland in liquidation of the balance due on account of her proportion which had been advanced by Great Britain, are necessarily excluded from the revenue of Great Britain, as stated at page 392, the amounts of these advances not being included in the proportionate expenditure of Great Britain.

App. No. 5.

The revenue of Great Britain and Ireland, from 1801 to 1817, were given by me, p. 317, and by the Treasury, p. 392, and are as follows:—

		Great Britain.	Ireland.
		£.	£
p. 317.	Revenue—Mr. Forbes' account - - -	917,029,210	84,100,825
p. 392.	„ Treasury account - - - -	910,745,670	78,004,979

The difference is comparatively slight, and the relative proportions do not materally differ.

The net revenue, *i. e.*, the sum available for general expenditure, is ascertained by deducting from the revenue of each country the charge for the ante-Union debt. There is a serious difference between the estimate I supplied, p. 309, and that given by the Treasury, p. 396. They are as follows:— p. 309. p. 396.

		Great Britain.	Ireland.
	Charge for ante-Union debt:	£.	£.
p. 309.	Charge, per Mr. Fisher - - - -	24,246,300	1,130,140
p. 396.	„ the Treasury - - - -	22,161,754	1,573,351
	Difference - - - £.	2,084,546	443,300

It is apparent that there must be a difference in the nett revenue between the Treasury statement and mine, equal to sixteen times the difference. I shall not go into the accuracy of either (*d*); but I think the Treasury was deficient in candour in not stating the reason of the difference; it arose from disagreement as to the charge.

In

Note by Mr. *Chisholm*, Chief Clerk of the Exchequer.

(*d*) Although Mr. Fisher declines to enter into the question of the accuracy of the two statements, it may be worth while to do so, in order to show from this one instance how utterly valueless are Mr. Fisher's financial figures and criticisms. It will be sufficient to consider the debt of Great Britain only.

The official account at page 396 shows in detail the actual amount of the Funded and Unfunded Debt of Great Britain at the period of the Union, and the estimated annual charge. The sums are all taken from the Finance Accounts presented to Parliament in 1801. The principle upon which the amount of the Debt is calculated, for the purpose of estimating its annual charge, is fully explained in Appendix No. 6, of 1865, page 100.

Mr. Fisher's calculation at page 309, is as follows:	£.
Charge for interest upon 517,848,026 *l.*, at 3½ per cent. -	18,111,581
„ Sinking Fund upon same - - - -	5,374,709
„ „ „ per Act 35 Geo. 3 - - -	1,200,000
£.	24,246,300

As the three sums cast to 24,686,290 *l.*, here is *error No.* 1, *of* 439,990 *l. per annum.*

The capital sum of 517,846,026 *l.* is merely an arbitrary assumption of his own, as may be seen by the mode at which he arrives at it, at page 307. The rate of interest of 3½ *l.* per cent. is also arbitrarily assumed by him, no part of the Debt then bearing that rate. The result is an overstatement of the annual interest, being *Error No.* 2, *of* 1,213,673 *l. per annum.*

Mr. Fisher next calculates Sinking Fund at 1 *l.* per cent. upon the whole of the Debt, and he appears to be ignorant that the Sinking Fund of 1 *l.* per cent. was charged only upon that portion of the Funded Debt which was created by loans raised after the commencement of the war in 1792, under the Act 32 Geo. 3, c. 55. The actual amount of this Sinking Fund at the Union was 1,938,411 *l.*, showing an overstatement by Mr. Fisher, being *Error No.* 3, *of* 3,436,298 *l. per annum.*

As Mr. Fisher has entirely omitted the charges of management of Debt and of Terminable Annuities, amounting respectively to 218,809 *l.* and 1,906,625 *l.*, these together amount to an understatement by Mr. Fisher, being *Error No.* 4, *of* 2,125,434 *l. per annum.*

The balance of these errors amounts to 2,084,547 *l.*

In my account I included, in the "contribution from revenue," the charge for "management of the revenue." I did so according to the decision of the Committee of 1815. I deducted the charge for ante-Union debt, as above. The Treasury exclude the "management of the revenue," and only deducts the charge for the ante-Union debt, as above. There is, therefore, a large difference in the balance. App. No. 5.

I shall examine whether the Treasury account is correct, using only their own figures.

	Great Britain.	Ireland.	
	£.	£.	
Gross revenue, 1801 to 1817	901,745,070	78,004,979	p. 392.
Less charge for pre-Union debt	354,588,065	22,157,622	
Nett revenue	556,157,005	55,847,357	
Management of revenue	44,920,474	10,444,463	p. 392.
Balance, being revenue applicable to actual public expenditure	511,236,521	45,402,894	
Col. 1 states it to be	528,150,589	42,407,593	pp. 387, 388.
Difference over statement for Great Britain	16,926,068	—	
„ under „ Ireland	- -	2,995,301	

One of the statements of the Treasury must be erroneous (*e*); the account, p. 387, 388, gives Great Britain credit for more, and Ireland for less, than they paid.

The next column shows a greater effort to mystify the accounts. It deals with the amount raised by loans. The operations of the Sinking Fund are kept out of view (*f*). The Committee and the public are led to believe that the entire amount raised by loans was applied to the same purpose as the balance of Revenue, *i. e.*, for the General Expenditure of the United Kingdom; when, in point of fact, a large portion of the loans went to the Sinking Fund. The correct amount is the increase in the debt. It is shown, pp. 411, 412, and pp. 475, 476, to have been as follows:—

	Great Britain.	Ireland.	
	£.	£.	
Increase of debt from 1801 to 1817	280,096,957	90,573,668	pp. 411 412–475, 476.
Amount raised by loans	364,410,964	80,468,055	pp. 387, 388.
Difference over credit to Great Britain	84,313,977	—	
„ under „ Ireland	- -	10,025,683	

It

Notes by Mr. *Chisholm*, Chief Clerk of the Exchequer.

(*e*) These figures are very inaccurately quoted by Mr. Fisher, as may be seen by reference to the original figures. In the first column, for 901,745,070 *l.* read 910,745,070 *l.* In the second column, for 22,157,622 *l.* read 25,157,622 *l.*, being 1,572,351 *l.* 7 *s.* 10 *d.* × 16 (Mr. Fisher himself makes this sum 25,157,006 *l.* at the very next page); for 10,444,463 *l.* read 10,278,978 *l.* There are other blunders in the subtractions, as may be easily seen. The real difference between the two statements is that the sums at pp. 387–8 are in excess 16,914,058 *l.* for Great Britain and 160,786 *l.* for Ireland, over the sums at page 392. But these last sums are stated at page 392 to be "after excluding receipts in liquidation of the balance of joint expenditure," which amount exactly to the difference. Both accounts are therefore correct.

(*f*) This is an extraordinary misstatement. The heading of the column of the amount raised by loans expressly shows that the amount applied to the Sinking Fund is *not* deducted, and column 6, on the other side, shows in its heading that the Sinking Fund is included in the expenditure.

App. No. 5.

It must seem strange to any one who examines these accounts, to find it stated that the loans of Great Britain were 364,410,964 *l.*; the capital stock representing it, was only 280,096,987 *l.*; but that the converse took place with regard to Ireland; this is so absurd that no one can credit it, yet the Committee is expected to swallow it (*g*).

p. 384

An account given, p. 384, throws some light on this subject; it gives the amount paid to the Sinking Fund out of the loans.

		Great Britain.	Ireland.
		£.	£.
p. 384.	Amount received by loans - - - -	364,410,964	80,468,055
	Paid to Sinking Fund - - - - -	152,108,031	18,018,979
	Balance, being the nett amount of loans - -	212,302,933	62,449,076

The stock created to represent this is exhibited in the increased debt, as stated above. I complain of the unfairness of the Treasury account; it should have given either the amount added to the debt, or if it gave the entire loans, it should have disbursed at the other side the amount paid to the Sinking Fund. In its present state it misleads the Committee.

At the other side of the Treasury account, col. 5, pp. 388, 389, is headed thus: "Actual Expenditure, excluding Management of the Revenue, and Interest and Sinking Fund, and Management of Debt." There is no such column in my account; I merely gave the "sums voted." The expenditure here given is composed of two items, payments for joint and separate expenditure, and should correspond with the accounts given, pp. 390–393; the British accounts correspond, but not the Irish (*h*).

p. 390-393.

		Great Britain.	Ireland.
		£.	£.
p. 393, col. 5.	Payments for joint account - - - -	717,013,261	69,736,005
pp. 390, 391, col. 6.	„ separate „ - - - -	31,625,918	4,330,920
	Total - - - £.	748,639,179	74,066,925
pp. 388, 389, col. 5.	Makes the total expenditure - - - -	748,639,179	90,820,198
	Overcharge to Ireland - - - - -	- - £.	16,753,273

Ireland

Notes by Mr. *Chisholm*, Chief Clerk of the Exchequer.

(*g*) Mr. Fisher here draws his own inferences, after choosing to place the two following sums in juxtaposition:

1. 280,096,957 *l.*, incorrectly quoted as the "increase of debt from 1801 to 1817," but which sum is not to be found at the pages he quotes, or, to the best of my belief, anywhere else amongst the official figures.

2. 364,410,964 *l.*, correctly quoted from page 387 as the *net* amount raised by creation of debt in the 16 years; the details of this amount being shown at page 382.

The increase in the *estimated value* of the unredeemed debt of Great Britain between 1801 and 1817 is shown at page 410 to be 216,430,449 *l.*, viz., 329,868,585 *l.* in 1801, deducted from 546,299,034 *l.* in 1817. But neither is this sum of 216,430,449 *l.* or Mr. Fisher's assumed sum of 280,096,957 *l.* anywhere stated in the official accounts as the capital stock, representing the cash amount of 364,410,964 *l.* The *absurdity* therefore, and the notion that *the Committee is expected to swallow it*, are both Mr. Fisher's own invention.

(*h*) Mr. Fisher here compares two different accounts of expenditure, and draws the same incorrect inference as in similar accounts of revenue. (*See* note (*e*).) What he calls an overcharge to Ireland is merely the amount of difference between the two accounts, the first of which shows the total amount of payments on the joint and separate accounts for each of the 16 years, the second the total expenditure, after adding the other payments by Ireland in liquidation of the accumulated balance on the joint expenditure account. These other payments are shown at page 394 *in the same paper*, to be 16,753,273 *l.*, the exact amount of what Mr. Fisher chooses to call "overcharge to Ireland."

Ireland receives but scant justice. Wherever there is a mistake, it is against her.

The next column purports to give the interest upon the post-Union debt. This is ascertained by deducting the charge for the pre-Union debt from the total interest paid. The charge for interest, &c. is given, pp. 390, 391, and the charge for the pre-Union debt, pp. 396, 397. The amounts are as follows:— pp. 388, 389.

	Great Britain.	Ireland.	
	£.	£.	
Charge for interest, 1801, 1817 - - -	508,060,943	58,638,648	pp. 390, 391, col. 4.
Charge, pre-Union debt, 1801, 1817 - - -	354,558,065	25,157,006	
Balance - - - - - - - -	153,472,898	33,481,006	
Charge for interest - - - - -	153,472,898	33,481,006	pp. 388, 389.

The figures correspond, but neither account is correct. This will be shown by examining that for 1801. The stock created for Great Britain in 1801, and the charge, was as follows :—

		Interest.	£.	
British Stock created -	£. 49,271,475 at 3 per cent. -	£. 1,478,114		
Ditto - ditto -	4,455,225 at 4 „ -	188,209		p. 399.
Ditto - ditto -	2,227,610 at 5 „ -	111,380		
Sinking Fund on Total -	55,954,312 at 1 „ -	559,543		
Annuities - - - - - - - - - -		7,797		
Total charge for debt contracted in 1801 - - - - - -			2,345,043	
Charge for pre-Union debt - - - - - - - - -			22,161,754	p. 396.
Total charge for 1801 - - - - - - - -			24,406,797	
Charge for Interest, &c. - - - - - - - -			23,008,721	p. 390, col. 4.
Error, under charge to Great Britain - - - - -			1,398,076	
To this should be added for Interest on the balance of 3,076,563 *l.*, due 1801 - - - - - - - - - -			153,828	

The Irish side of the account shows an error, but, unfortunately, it is at the other side.

		Interest.	£.	
Irish Stock created - -	£. 4,392,750 at 3 per cent. -	£. 141,812		
Ditto - ditto - -	39,587 at 5 „ -	1,979		p. 401.
Sinking Fund on Total -	4,433,587 at 1 „ -	44,334		
Total charge on debt, created 1801 - - - - - - -			187,125	
Charge for pre-Union debt - - - - - - - - -			1,572,351	p. 397.
Total charge for 1801 - - - - - - - -			1,759,476	
Charged for Interest, &c. - - - - - - - -			1,974,140	p. 391, col. 4.
Error overcharged to Ireland - - - - - - -			214,664	
To this should be added for Interest on the balance of 3,166,116 *l.* to credit in 1801 - - - - - - - - -			190,000	

It is surprising that the glaring inaccuracy of this account did not prevent its presentation (*i*). The clerks who prepared it must have had a strange opinion of the Committee when they laid before it an account containing the following :—

	Great Britain.	Ireland.	
	£.	£.	
Amount received by loan, 1801 - - -	30,106,593	4,525,706	
Interest, and charge thereon - - - -	846,967	401,789	pp. 388, 389.

If

Note by Mr. *Chisholm*, Chief Clerk of the Exchequer.

(*i*) The *glaring inaccuracy* is entirely Mr. Fisher's own creation. It arises from his confounding the estimated charge *for* the year, with the actual expenditure *in* the year. *See* also Note (*k*), next page.

App. No. 5.

If those who prepared the account believed that the Committee would adopt such a statement, they must have fancied they were gifted with great credulity. No one can believe an account to be correct which states that the charge for 4,500,000 *l.* raised for Ireland was 401,789 *l.*, and yet that the charge for 30,000,000 *l.* raised for Great Britain was only 846,967 *l.*, the rate for the former being 8¾ per cent., that for the latter 2¾ per cent. It is evident that the account is incorrect, because the charge for the debt of 1801 is stated, pp. 406, 408. I contrast the two accounts.

	Great Britain.	Ireland.
	£.	£.
pp. 406. 408. Charge for debt, 1801 - - - - -	2,229,945	179,558
pp. 387, 388. Ditto - ditto - - - - - -	846,593	401,789
Undercharge to Great Britain - - - -	1,382,978	—
Overcharge to Ireland - - - - -	- - -	221,231

Can anyone believe both these statements to be true? (*k*)

According to my calculations, the charge for the British debt from 1801 to 1817 should be increased by 41,592,762 *l.*, and that of the Irish should be diminished by 12,017,221 *l.*

I believe I have now shown that every column in these returns are incorrect. I trust the Committee will take the needful steps to ascertain the truth.

Two questions were—1st. Were the receipts from revenue and loans equal to the expenditure? 2d. Was Ireland overcharged? Did she sustain substantial injustice? The statement furnishes the following replies:—

	Great Britain.	Ireland.
Receipts:	£.	£.
p. 397. Balance to credit, 1801 - - - - -	- - -	3,166,116
pp. 384, 385. Revenue, 1801 to 1817 - - - - -	910,745,070	78,004,979
Loans, excluding Sinking Fund - - -	212,302,933	62,449,079
Revenue and Loans - Total - - £.	1,123,048,003	143,620,172
Expenditure:		
Balance to debit, 1801 - - - - -	3,076,568	—
pp. 384, 385. Expenditure, exclusive of Sinking Fund and management of debt - - - - -	1,104,592,091	131,439,847
Management of Debt - - - - -	44,920,474	10,278,979
Total Expenditure - - £.	1,151,589,153	141,718,825
Deficiency, Great Britain - - -	28,541,150	—
Over-payment, Ireland - - - -	- - -	1,901,348

The Treasury admits, p. 384, that the Expenditure of Great Britain was in excess of the Receipts by 15,319,527 *l.*; (*l*) but this does not account for the entire deficit.

The

Notes by Mr. *Chisholm*, Chief Clerk of the Exchequer.

(*k*) A full explanation of the truth of this official statement, and of the fact of the large excess of the charge of the Funded Debt of Great Britain over the actual expenditure in 1801, and the large excess of the actual expenditure of the Funded Debt in Ireland over the annual charge for the same year, has been already laid before the Committee, and will be found in Appendix, No. 6, of 1865, page 100.

(*l*) The Treasury admits nothing of the kind; that is to say, in the sense put forth by Mr. Fisher. The sum of 15,319,527 *l.* is shown, at page 384, to be the difference between the amounts of income and expenditure in the 16 years from 1801 to 1817, as shown in the Finance Accounts. This difference arises simply from the mode of stating the public accounts, practised up to 1822, the income being stated according to the receipts into the Exchequer; the expenditure not according to the issues from the Exchequer, but according to the payments by the distributing officers, and out of moneys not only issued from the Exchequer, but also received from other sources.

The next question lies at the base of the inquiry—Was Ireland overcharged? Did she sustain substantial injustice? Let the facts answer: App. No. 5.

	Great Britain.	Ireland.
	£.	£.
Balance to credit, Ireland, 1801 - - -	- - -	3,166,116
Revenue, 1801 to 1817 - - - - -	910,745,070	78,004,979
Total - - -	910,745,070	81,171,095
Less 16 years' charge pre-Union debt, including 3,076,593*l.* due in 1801 -	357,664,632	25,157,616
Nett contributions - - - -	553,180,338	56,013,479
Loans:—Increase of debt, 1801–1817 - -	280,096,987	90,573,668
Total Revenue and Loans - - £.	833,180,425	146,527,145
Ditto for United Kingdom - - -	£. 979,607,570	
Proportions—Great Britain, $\frac{15}{17}$; Ireland, $\frac{2}{17}$ -	864,359,620	115,247,952
Underpaid by Great Britian - -	31,379,195	—
Overpaid by Ireland - - - -	- - -	31,279,195

My previous estimate of the over-payment of Ireland, p. 318, was 35,784,164*l.* If the charge for the pre-Union debt were correctly stated, I believe the account would show that I have not overstated it. It appears from the Treasury Accounts that Ireland was over-charged 30,279,195 *l.* (*m*). p. 318.

There are many inaccuracies in the Treasury Accounts upon which I do not dwell. I confine myself to those which affect my evidence, or have a direct bearing upon the great question at issue.

The present state of Ireland is greatly owing to mis-legislation, which has arisen from a misapprehension of facts. Committees and members of the Legislature have been misled; the consequences of erroneous reports and erroneous returns have been injurious to Ireland and to the Empire.

I have to thank the Committee for the kindness I have received from them, and for the great patience with which the inquiry has been conducted. I trust its report will be framed with care, and that it will avoid the erroneous documents, which can only lead to incorrect conclusions.

I am, &c.
(signed) *Joseph Fisher.*

Colonel Dunne, M.P.,
Chairman of the Committee on Irish Taxation.

Note by Mr. *Chisholm*, Chief Clerk of the Exchequer.

(*m*) This is merely an unfounded assertion of Mr. Fisher. He alleges no fact to substantiate it or test its truth.

P. S.—The preceding notes are intended merely to answer, as briefly as possible, the charges alleged by Mr. Fisher against the Financial Officers and the accounts prepared by them for the Committee, and to show how utterly unfounded these charges are. It appears unnecessary further to expose the numerous errors of Mr. Fisher's own figures and statements, or the misconceptions into which he has been led by his inexperience and want of knowledge of the Financial Accounts of the period in question, and of the various legislative restrictions and regulations affecting them.

Exchequer,
1 June 1865.

H. W. Chisholm,
Chief Clerk.

App. No. 6.

Appendix, No. 6.

Mr. *Chisholm*, Chief Clerk of the Exchequer, to Sir *Stafford H. Northcote*, Bart., M.P.

Sir,

THERE are two points referred to in the evidence before the Irish Taxation Committee of last Session, upon which it may be desirable to place before the Committee more satisfactory information:

1. As to the large excess of the charge of the Funded Debt of Great Britain over the actual expenditure, in 1801, and the large excess of the actual expenditure of the Funded Debt in Ireland, over the annual charge for the same year. (*See* evidence 6893.)

1. As to the principle upon which the Amount of the Public Debt of each Country, in 1801 and 1817, should be calculated, for the purpose of estimating its annual charge and value. (6413–6466.)

With respect to the first of these questions, it appears that whilst in Great Britain the charge for the Funded Debt was increased in 1801 by 2,299,945 *l.* (Appendix 1864, p. 406), the actual expenditure for the whole of the Public Debt exceeded the charge at the beginning of the year by no more than 846,967 *l.* (p. 387); but in Ireland, although the charge for the Funded Debt was increased in 1801 by 179,558 *l.* only (p. 408), the actual expenditure for the whole of the Public Debt was 401,789 *l.* (p. 388), in excess of the charge at 5 January 1801.

I proceed to state, in explanation, the exact facts for Great Britain and Ireland separately.

As to Great Britain, 2,299,945 *l.* was the amount of the increase of the annual charge of the Funded Debt at 5 January 1802, as compared with 5 January 1801. The charge was increased during the year, by the debt created in 1801, but diminished by the cessation of the charge on 1,905,345 *l.*, 3 *l.* per cent. stock transferred for redemption of Land Tax, and of management on 8,091,454 *l.* redeemed by the Sinking Fund.

The amount of stock created in 1801 was, as stated at p. 399, £. 55,954,312. But of this amount 7,425,375 *l.* was created by funding Exchequer Bills—a mere conversion of debt, not entailing increased charge. In fact, as the funding occurred late in the year 1801, no part of the charge of the Funded Debt created by it was payable during the year 1801. It is shown at p. 399, that the amount of stock created for the loans of 1801 was only 48,528,937 *l.*; the annual charge was, as I shall show, 1,998,204 *l.*

The sum of 846,967 *l.* is stated to be the amount of *actual expenditure in* 1801, for Public Debt, in excess of the annual charge of the Ante-Union Debt, as estimated at the beginning of the year. In point of fact, this estimated annual charge was first exceeded in the expenditure of 1801 by 342,049 *l.*, the amount of charges for the loan of 1800, due in that year, but the payment of which was postponed under a provision of the Loan Act, which will be referred to presently; the charge was also diminished by the cessation of the charge on stock transferred for redemption of Land Tax, &c., so that the actual expenditure in 1801, for the loans raised in that year, was, as I shall show, no more than 692,954 *l.*

The real question, which I admit appears to require a satisfactory answer is, how is it that with an annual charge for the loans of 1801, of 1,998,204 *l.*, the actual expenditure was no more than 692,954 *l.*? In order to afford a full explanation, this answer must, I fear, be given at considerable length.

The

The stock created, and the total annual charge for the loans of 1801, were as follows:— App. No. 6.

	Capital Stock.	Annual Charge.
Loan of 25,500,000 *l.*, part of 28,000,000 *l.*:	£. s. d.	£. s. d.
£. 3 per Cent. Consols., Dividends from 5 Jan. 1801	31,875,000 – –	956,250 – –
£. 3 per Cent. Reduced Annuities, Dividends from 10 October 1800	12,941,250 – –	388,237 10 –
£.	44,816,250 – –	1,344,487 10 –
Sinking Fund, 1 *l.* per cent., from 5 April 1801	– – –	448,162 10 –
Management	– – –	20,167 6 3
		1,812,817 6 3
Loan of 2,970,150 *l.*:		
£. 3 per Cent. Consols., Dividends from 5 July 1801	742,537 10 –	22,276 2 6
£. 3 per Cent. Reduced Annuities, Dividends from 10 October 1801	742,537 10 –	22,276 2 6
£. 4 per Cents., Dividends from 10 October 1801	1,485,075 – –	59,403 – –
£. 5 per Cents. – – ditto – – – ditto	742,537 10 –	37,126 17 6
£.	3,712,687 10 –	141,082 2 6
Long Annuity	– – –	2,598 17 7
Sinking Fund on Stock, and Capitalised Long Annuity	– – –	37,407 10 10
Management	– – –	4,298 16 6
		185,387 7 5
Total for the Loans of 1801 – – £.	48,528,937 10 –	1,998,204 13 8

It is at once evident that, as the earliest half-yearly dividend on the loan of 2,970,150 *l.* was not payable till after 5th January 1802, no part of the annual charge of this loan of 1801, amounting to 185,387 *l.* 1 *s.* 5 *d.* could form part of the actual expenditure of 1801.

There remains only the charge of the 25,500,000 *l.* loan. The second half-yearly dividend on 31,875,000 *l.*, 3 *l.* per cent. Consols, amounting to 478,125 *l.* would also not be payable till after 5th January 1802, nor form part of the expenditure of 1801.

The Sinking Fund was payable quarterly. Two quarters only were payable in 1801, releasing a further sum of 224,081 *l.* 5 *s.* from the expenditure of 1801.

Deducting these three sums, amounting to 887,593 *l.* 12 *s.* 5 *d.*, from the total annual charge, there remained only 1,056,882 *l.*, which could form part of the expenditure of 1801.

Now there was a provision contained in all the Loan Acts that no dividend should be paid to any contributor until he had paid up the whole of his instalments. If he had not completed his payments before the dividend was due, the payment of his dividend was postponed till the next half-year. I shall show the actual effect of this provision on the *payments of the dividends* for this loan of 1801.

Loan of 28,000,000 *l.* for *Great Britain* and *Ireland.*

	Amount of Stock held by Contributors who completed their Payments.	Actual Payments of Dividends, &c., in 1801.
	£. s. d.	£. s. d.
£. 3 per Cent. Consols, Dividend due 5 July 1801, to Contributors who completed their Payments on or before 2 July 1801	18,165,937 10 –	272,489 1 3
£. 3 per Cent. Reduced Annuities, due 5 April and 10 October 1801, to Contributors who completed their Payments on or before 2 April 1801	3,010,363 2 6	90,310 17 11
£. 3 per Cent. Reduced Annuities, due 10 October 1801, to Contributors who had not completed their Payments before 2 April 1801, but who completed the same on or before 7 October 1801	8,361,570 – –	250,847 2 –
Sinking Fund 1 *l.* per cent. on 49,210,000 *l.* Stock; two quarters to 10 October 1801	– – –	246,050 – –
		859,697 1 2
Deduct amount received from Ireland, for the charges on 2,500,000 *l.*, the Irish portion of the loan of 28,000,000 *l.* (as will presently be shown in detail)	– – –	166,742 16 2
Total Net Amount for Great Britain – – – £.		692,954 5 –

App. No. 6.

Besides the balance of the dividends, the whole of the allowance for management was also postponed till 1802. I therefore affirm, and am prepared to prove, by the evidence of the official books of the period, which are now before me, and from which these figures are taken, that although the annual charge for these loans of 1801 was 1,998,204 *l.*, yet the actual expenditure in 1801 amounted only to 692,954 *l.* 5 *s.*

With respect to Ireland, the sum of 179,558 *l.* is stated to be the increase of estimated charge for funded debt in 1801 over 1800. In this case, as there happens to be little else to affect the difference of the estimated charge for these two years, this sum very nearly agrees with the annual charge of the loans of 1801, which was as follows:—

	£.	*s.*	*d.*
Interest, Sinking Fund, and Management on 2,500,000 *l.* Loan of 1801, payable in England - - - -	177,727	3	9
Interest on 39,587 *l.*, 5 *l.* per Cent. Debentures, payable in Ireland - - - - - - - - - -	1,979	7	–
	£. 179,706	10	9

I will first deal with the annual charge of the 2,500,000 *l.* loan, so far as it became payable in 1801. Deducting one quarter's Sinking Fund 10,984 *l.*, as the charge did not commence till from 5th April 1801, the actual charge in 1801 was 166,743 *l.*

As the whole amount of the loan was duly remitted to Ireland in 1801, and no postponement of any portion of the dividends occurred as in Great Britain, and as all the charges due on 5th January, and payable in England, had necessarily to be remitted from Ireland to the British Exchequer before that day, it followed that the actual expenditure of 1801, for this loan, amounted to 166,743 *l.*

I quote the details of this expenditure from the Treasury Revenue Book of 1801, now before me.

Loan 1801.	Capital Stock. £.	*s.*	*d.*	Dividends, &c. £.	*s.*	*d.*
£. 3 per Cent. Consols, one year to 5 January 1802	3,125,000	–	–	93,750	–	–
£. 3 per Cent. Reduced Annuities, one year to 10 October 1801 - - - - - - - -	1,268,750	–	–	38,062	10	–
	4,393,750	–	–	131,812	10	–
Sinking Fund, 1 *l.* per Cent., three-quarters of a year, to 5 January 1802 - - - - -	-	-	-	32,953	2	6
One year's management - - - - -	-	-	-	1,977	3	8
Total charge of 2,500,000 *l.* loan, actually paid in the year ending 5 January 1802 - -	-	-	£.	166,742	16	2

The interest on 39,587 *l.*, 5 *l.* per Cent. Debentures, was payable in Ireland half-yearly, and commenced from 25th March 1800. One half-year's interest only was payable in 1801, amounting to 989 *l.* 13 *s.* 6 *d.* The total charge of the Irish loans of 1801, due and actually paid in that year, amounted therefore to 167,732 *l.* 9 *s.* 8 *d.*

It remains to be explained how it was that the actual expenditure for the debt of Ireland in 1801 exceeded the charge as estimated at the beginning of the year by 401,789 *l.*, when the expenditure for the new loans of 1801 was only 167,732 *l.* How is this extra expenditure of 234,057 *l.* to be accounted for? Now, the explanation is very simple, as will be seen by merely stating the exact facts.

I will first show, as nearly as I am able, the separate heads of expenditure upon which this excess arose. Sufficient details are not given in the official books and returns in this country to enable me to show the several dates of the actual payment of the charges of the debt in Ireland, so that I cannot verify the payments of the Irish debt so precisely as those of Great Britain. The details of the payments of the Irish debt in the year 1801-2 are shown only in the balance sheet for that year, reprinted at page 429 of the Appendix, and which does not distinguish between the charges of the debt payable in Ireland and in England. I will now show the amounts of these payments in juxtaposition with their estimated

estimated charge, as stated at page 397, adding the amounts of the charges for the loans of 1801, actually paid in that year.

Heads of Expenditure.	Estimated Charge for 1801, stated at page 397, and of New Loans.			Actual Payments in 1801, as per Appendix, p. 429 (converted into British Currency).			Excess of Payments over Charge.		
	£.	s.	d.	£.	s.	d.	£.	s.	d.
Interest on Stock and Debentures:									
In Ireland -	511,815	15	–						
In England -	557,450	–	–						
	1,069,265	15	–						
Deduct Interest on Bank of Ireland Capital, 55,000 *l.*, Irish Currency (included below in Bank Annuities)	50,769	4	7						
	1,018,496	10	5						
Add Interest of New Loans payable in 1801 - - -	132,802	3	6						
				1,151,298	13	11	1,321,019	7	–	169,720	13	1
Bank Annuities -	16,730	15	5						
Add Interest on Bank Capital - -	50,769	4	7						
				67,500	–	–	67,500	–	–	—		
Life Annuities -	-	-	-	47,215	7	9	62,605	16	2	15,390	8	5
Long Annuities -	-	-	-	9,416	13	4	9,791	13	4	375	–	–
Short Annuities -	-	-	-	47,808	12	8	48,167	–	4	358	7	8
Management - -	6,783	14	6									
Add Management of New Loan in England - -	1,977	3	8									
				8,760	18	2	14,478	14	2	5,717	16	–
Sinking Fund:												
In Ireland - -	133,327	17	10									
In England -	154,402	8	4									
Of New Loan in England, payable in 1801 -	32,953	2	6									
				320,683	8	8	361,348	7	6	40,664	18	10
Interest on Exchequer Bills - -	-	-	-	87,400	3	–	89,229	11	3	1,829	8	3
			£.	1,740,083	17	6	1,974,140	9	9	234,056	12	3

I will next explain the causes of these excesses of actual expenditure over the estimated annual charge.

Previously to the Union, the Irish financial year ended on 25th March. The last complete financial year ending on that day, was that to 25th March 1800. The accounts were then made up for three-quarters of a year ending 25th December 1800. (*See* Finance Accounts, Ireland, 1801, vol. 4, p. 345.) At the time of the Union, the financial year of Ireland was altered so as to end on 5th January in each year, and the *first financial year after the Union ended on 5th January* 1802. *But it actually began from 25th December* 1800, as may be seen from the balance sheet of the year (*Appendix*, p. 428), where the balance of 1,697,298 *l.* 14 *s.* 9 *d.* (Irish currency) agrees with the amount certified as remaining in the Exchequer on 25th December 1800. (*See* Finance Accounts, 1800, vol. 4, p. 343). *Consequently, the expenditure of that year included not only the annual charges of debt payable in the ordinary four quarters from 5th January* 1801, *to 5th January* 1802, *but also, and in addition, such of the annual charges as were paid in the* 11 *days from 25th December* 1800, *to 5th January* 1801. During these 11 days, there was remitted to the British Exchequer the following amount of charges of the Irish debt funded in England, which were due on 5th January 1801, it being the practice to make such remittance a day or two before the expiration of the quarter to the British Exchequer, in readiness to be issued from thence on the first day of the following quarter:—

	£.	s.	d.
Half-year's Interest on Consols - - - - - - -	162,375	–	–
„ Management - - - - - - - -	2,407	2	–
One quarter year's Sinking Fund - - - - - -	38,600	12	1
£.	203,382	14	1

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Nearly the whole amount of the excess of payments in 1851-2 over the estimated annual charge is thus accounted for.

There were also certain amounts of half-yearly interest and Sinking Fund on debentures payable in Ireland and due at 25th December 1800, which were paid before 5th January 1801, and account for the remaining excess of payments for interest and Sinking Fund on stock and debentures.

The excess of expenditure for Life Annuities was in like manner caused by the payment of such of the Annuities due at 25th December, as were demanded before 5th January, these Life Annuities being payable half-yearly at Midsummer and Christmas.

The excess of 375 *l.* in Long Annuities is explained in a note at page 397, as being an over payment, continued annually until 1811, when it was corrected, and the total amount overpaid was allowed to Ireland.

The balance of the excess of payments for management was caused by the operation of the Irish Act, 40 Geo. III., c. 3, s. 8, which authorised certain charges of management of the Funded Debt in Ireland to be paid to the Bank of Ireland, such charges not having arisen at 5th January 1801, and consequently not being included in the estimate of the annual charge of the Irish debt at the period of the Union, as shown in the Finance Accounts of 1801, from which the statement of the annual charge in the Appendix, page 397, is taken.

The whole amount of the excess of actual expenditure, in 1801, over the estimated annual charge of the Irish debt, appears thus to be satisfactorily accounted for.

I have been the more particular in giving a full explanation of the remarkable fact of the expenditure in 1801 for the debt of Great Britain being so much less than the annual charge, whilst the expenditure for the debt of Ireland so much exceeded the charge, from the circumstance of The O'Conor Don having noticed this fact, and questioned me upon it on my last day's examination before the Committee (Qu. 6893-4), when I was unable to give an explanation entirely satisfactory to myself, not having then sufficiently examined into the subject.

It may here be noticed, with reference to the relative amounts of the charges of the Irish debt, payable in Ireland and in England, that the fact of the amount of 1,900,000 *l.* 5 *l.* per Cents. being *funded in Ireland, but payable in England*, causes an apparent discrepancy in some of the official returns, which distinguish between the debt of Ireland *payable in England and payable in Ireland*. In the original statement in the Finance Accounts of 1801, from which the charge, as shown in pages 397 and 408, was taken, this amount is included in the debt payable in England, where undoubtedly it was payable; whilst in some of the returns of expenditure, as in the Appendix to the Report on Irish Poor of 1830, it is included in the debt payable in Ireland. In truth, these expenditure returns include only in the Irish debt payable in Great Britain, the amount *remitted through the British Exchequer* for the Irish debt funded in Great Britain. This apparent discrepancy affects only the relative amounts of Irish debt payable in England and in Ireland respectively, but does not affect the total amount.

The second question for consideration is the principle upon which the amount of the Public Debt of each country in 1801 and 1817 should be calculated, for the purpose of estimating its annual charge and its value.

In my statement of the annual charge of the Public Debt of each country at the period of the Union, in Appendix 12, at pages 396 and 397, viz., Great Britain, 22,161,754 *l.*, and Ireland, 1,572,351 *l.*, I have included only interest and other charges upon the Funded Debt and Unfunded Debt in Exchequer Bills; but I have not included any sum for interest or Sinking Fund upon the other outstanding demands, after deducting the balances. The amounts of the respective debts of the two countries on 5th January 1801, and 5th January 1817, as valued in the Accounts, pages 410 and 411, have been stated by me on the same principle.

The only real question is, should the difference between the outstanding liabilities for Unfunded Debt other than Exchequer Bills, and the balances in hand, be taken into account in calculating the amount of the respective debts of each country, and annual interest be charged upon it. I will first consider this question as it affects the calculation of the annual charge upon the debt.

First, with respect to the amounts of these other outstanding liabilities, as stated at pages 396 and 397, I may observe that those amounts are taken from the Finance Accounts, prepared and laid before Parliament at the time; from which accounts, indeed, all the sums in the numerous accounts prepared by me for the Committee have been, as far as possible, taken, and by reference to which, they may be verified. But these amounts so taken are merely, so far as relates to Great Britain, certain outstanding demands, as returned from the several departments of expenditure, and including only demands for *Supply Services*; whilst, as regards Ireland, the Finance Accounts do not show any estimate for outstanding demands of Unfunded Debt, other than Irish Treasury Bills. This fact is stated in the Account at page 307. It can easily be shown, however, that, though not included in any Parliamentary Return, there were actually outstanding demands in Ireland to a large amount, similar to those in Great Britain, which were returned to Parliament; and it can also be proved, from the subsequent accounts of actual expenditure, that the total actual liabilities of each country for these outstanding demands were far greater in amount than is shown, or could have been estimated and shown, in the Finance Accounts. These amounts of liabilities for services incurred prior

to

to the Union, not estimated but actually paid, are stated in detail, so far as regards Supply Services, in the accounts of separate and joint expenditure appended to the Reports of the Committees of 1811 and the following years, as well as in other Parliamentary Returns, and in the Finance Accounts; the details of the Consolidated Fund payments are, I believe, shown only in the Treasury and Exchequer books. I am prepared to verify the accuracy of the following Statement, the details of which for each year will be found in a separate account appended.

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See Account (A.) appended.

Liabilities of *Great Britain* and *Ireland* respectively, at the period of the Union, for other outstanding Demands beyond the Annual Charge of the Funded Debt and Unfunded Debt in Exchequer Bills.

	GREAT BRITAIN.		IRELAND.	
	Amounts stated in Finance Accounts, 1801, and in Appendix 12, 1864, p. 396.	Actually paid in the several subsequent years, 1801–1816.	Amounts stated in Finance Accounts, 1801.	Actually paid in the several subsequent years, 1801–1816.
	£. s. d.	£. s. d.		£. s. d.
Charges of Debt postponed in 1800	- - -	342,029 11 7	—	—
Civil List and other Consolidated Fund charges	- - -	288,473 6 6	- -	144,501 5 8
Payments out of Revenue in progress to Exchequer	- - -	- - -	- -	8,585 13 4
Navy	8,705,886 8 11	8,278,970 11 10	—	—
Ordnance	606,967 19 7	804,174 13 –	—	—
Army (including Barracks) and Treasury Bills, &c. for Army Services	2,022,250 12 3	5,220,795 9 4	- -	845,846 3 5
Miscellaneous Supply, viz.:				
Expenses arising out of War with America	61,818 15 –	1,356,184 2 1*	—	—
Valuation of Ships surrendered prior to 1801	23,000 – –	465,149 9 5	—	—
East India Company, for expenses in late War	- - -	1,000,000 – –	—	—
Compensation for losses by the Union	- - -	- - -	- -	1,293,057 18 3
Compensation for losses during the Rebellion	- - -	- - -	- -	193,708 3 11
Inland Navigations	- - -	- - -	- -	458,680 12 –
Lottery Prizes	- - -	500,000 – –	- -	279,000 – –
Other Miscellaneous Services	392,910 19 2	772,524 1 6	- -	182,756 3 8
£.	11,812,834 14 11	19,028,301 5 3	- -	3,406,136 – 3

* Including payments for interest since 1801, not separately distinguished.

The payments in Ireland for compensation for losses by the Union were made under a vote of the Irish House of Commons of 2d July 1800, for 1,410,000 *l.* Irish currency, or 1,301,538 *l.* 9 *s.* 3 *d.* British, and in pursuance of the Irish Act, 40 Geo. 3, c. 60, s. 22.

The payments for suffering loyalists for losses during the Rebellion were in pursuance of a grant of 230,000 *l.* Irish currency, or 212,307 *l.* 13 *s.* 11 *d.* British, by the Irish Act, 40 Geo. 3, c. 60, s. 3.

The payments for inland navigations in Ireland were made in pursuance of a vote for 500,000 *l.* Irish currency, by the Irish House of Commons, on 3d July 1800, and of the Irish Act, 40 Geo. 3, c. 51; of this amount, 2,785 *l.* 7 *s.* 9 *d.* had been paid prior to the Union, leaving at that period an outstanding liability of 497,214 *l.* 12 *s.* 3 *d.* Irish, or 458,967 *l.* 6 *s.* 9 *d.* British currency. The actual payments under the Irish grant of 1800, during the 16 years from 1801 to 1816 inclusive, amounted to 444,557 *l.* 10 *s.* 5 *d.*, and they are included in the annual Finance Accounts for 1802, and several of the subsequent years, under the head of "Payments for purposes appointed by the Parliament of Ireland prior to the Union." In the several Annual Budgets of the Irish Chancellor of the Exchequer, subsequent to the Union, these payments for inland navigations were included in the estimated separate charge for Ireland; but, in pursuance of a Resolution of the Committee of 1811 (*see* Report, p. 13), though for what reason I cannot discover, these payments appear in the accounts appended to the reports of the Committees from 1811 to 1816, to have been included in the joint charge, and not in the separate charge for Ireland, notwithstanding that some arrears of previous grants for similar expenditure, paid in the years 1801 and 1803, are included in the separate charge for Ireland. With this explanation I have now thought right to include the total amount of payments under this head in the liabilities which had been incurred by Ireland at the Union.

With the exception of the charges of debt due in 1800, the payment of which was postponed to 1801, I have not included amongst the outstanding demands of either country at the period of the Union, the amounts of the charges of Public Debt due or calculated up to that date, but not paid or even payable till afterwards. These amounts constituted a portion of the annual charges of debt payable in the usual course within the year, and may, I consider, fairly be considered as included in the annual charge of the debt already stated. This course is equally applicable to both countries, the date to which the charge of the debt was estimated, though nominally 1st January 1801, the actual period of the

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Union, being actually the nearest date to which the accounts were made up, viz., 5th January 1801, for Great Britain, and 25th December 1800, for Ireland, in both cases immediately previous to the quarterly charges of the debt becoming payable.

It may be desirable here to explain what might otherwise appear a discrepancy between the amount of the Unfunded Debt of Great Britain at the Union, as stated by me at page 396, upon the authority of the Finance Accounts, and the amount of 30,199,040 *l.* as stated in the Treasury Return of 1819, reprinted at page 474, and specified at pages 471-2-3, viz.:

	£.
Unfunded Debt in Exchequer Bills - - - - - - -	26,080,100
Ditto - - - Navy Bills - - - - - - - -	3,286,827
Ditto - - - Ordnance Debentures - - - - - -	832,113
	£. 30,199,040

Navy Bills and Ordnance Debentures were ordinarily used for payment of a considerable portion of these two services. The sum of 3,286,827 *l.* 2 *s.* 9 *d.*, Navy Bills, is comprised in the total amount of 8,705,886 *l.* 8 *s.* 11 *d.* outstanding demands for Navy Services, stated at page 396, and is specified in the details of this amount at page 275 of the Finance Accounts of 1801 (Vol. 3), under the several heads of Navy, Victualling and Transport Bills, payable at 90 days' date. In like manner, the sum of 832,113 *l.* 9 *s.* 6 *d.*, Ordnance Debentures, corresponds with the amount of 606,967 *l.* 19 *s.* 7 *d.*, outstanding demands for Ordnance Services, stated at page 396, and is specified in the details of this last amount at page 274 of the Finance Accounts of 1801, certain deductions being made to account for the difference between the two sums.

I will next consider what Ways and Means were available to meet these outstanding demands.

With respect to the Balances in the Exchequer of each country at the period of the Union, viz.:

	£.	s.	d.
Great Britain, on 5th January 1801 - - - - -	7,619,246	6	1
Ireland, on 25th December 1800 (British Currency) - -	1,566,737	5	11

Although these amounts appear in my accounts (pp. 396-7) as deducted from the outstanding liabilities, in obedience to the terms of the Order of the House of Commons, to which these accounts are a return, yet, strictly speaking, these balances were otherwise appropriated, and returned so to Parliament in the Finance Accounts. They could not therefore be actually applied in reduction of these liabilities. They were appropriated, in the first instance, to the payment of the Quarterly Debt Charges.

It may be convenient to consider the Ways and Means of each country separately. I will therefore begin with those of Great Britain. The balances in the hands of collectors and receivers, as well as the balances of loans unpaid, formed a portion only of the Ways and Means applicable to outstanding liabilities. You, Sir, are well aware of the practice established long before this period, that it was the duty of the Chancellor of the Exchequer to make provision in the annual Budget for the whole amount of Supply Services required for the year, the necessary Ways and Means being granted by Parliament and recited in the Appropriation Act. Ways and Means had accordingly been specially provided in 1800 for the whole amount of the Supply Services of Great Britain for that year, including nearly the whole of these outstanding demands on 5th January 1801, stated, as has been shown, at 11,812,834 *l.* 14 *s.* 11 *d.*; and exactly as this amount (which may be taken to represent the unissued balance of the total amount voted) had been authorised by Parliament to be issued, but had not been actually issued from the Exchequer, so the corresponding amount of Ways and Means had not yet been realised and paid into the Exchequer. So far, however, from any portion of this amount of outstanding demands for Unfunded Debt (except Exchequer Bills charged on Ways and Means to be raised subsequently to 1800), being justly considered as Public Debt chargeable with interest, I can prove that Ways and Means had been provided to meet all these liabilities of Great Britain for Supply Services voted, and that there was an estimated surplus of 65,837 *l.* 19 *s.* 7 *d.* (*See* Parliamentary Return, dated Treasury Chambers, 27th February 1801; Comm. Jour., 1801, Appendix, p. 773.)

But, in order to afford a full explanation, I should add that it was subsequently stated to Parliament that this estimated surplus was not expected to be realised. In his Budget of 18th February 1801, Mr. Pitt estimated the deficiency of these Ways and Means at 5,750,000 *l.*, viz.:—

	£.
Deficiency of estimated produce for 1800, of Income Tax - - -	1,000,000
Ditto - - ditto - - of Malt Duties (1799) -	400,000
Ditto - - ditto - - of Assessed Taxes, &c. -	1,350,000
Ditto - - ditto - of Duties on Malt, Beer, and British Spirits - -	3,000,000
	£. 5,750,000

Inasmuch,

Inasmuch, however, as these Ways and Means thus deficient had been appropriated to the payment of Exchequer Bills raised in anticipation of these duties, and charged upon them, and the whole amount of Exchequer Bills outstanding has been allowed by me as part of the Public Debt chargeable with interest, this deficiency does not affect in any way the statement that Ways and Means were fully provided for the other outstanding demands.

I may add that this estimated deficiency of 5,750,000 *l.* in the Ways and Means, added to an amount of 860,000 *l.* for certain liabilities included in the sums stated at page 396, and for which no Ways and Means had been provided by Parliament, viz. :—

	£.
Interest on Exchequer Bills	460,000
Discount on Loan and Lottery	200,000
Annual Grant of Sinking Fund	200,000
£.	860,000

made a total deficiency of Ways and Means of 6,610,000 *l.* This amount, for which it was necessary to make fresh provision, was accordingly carried forward by Mr. Pitt in his Budget, as a portion of the separate charge of England, to be provided for in 1801.

You will observe, Sir, that hitherto I have referred only to the *estimated* provision of Ways and Means to meet certain outstanding demands of Unfunded Debt of Great Britain at the period of the Union, stated to have amounted to 11,812,834 *l.* 14 *s.* 11 *d.*, whilst it has been shown that the liabilities actually paid in the several subsequent years up to 1816, amounted to no less than 19,028,301 *l.* 5 *s.* 3 *d.* But during these successive years, large amounts of arrears of revenue outstanding on 5th January 1801, were received at the Exchequer, and formed available Ways and Means to meet the arrears of expenditure. The Ways and Means arising from revenue, provided by Parliament for the Supply Services, were of two descriptions: 1st, The surplus of Consolidated Fund receipts, that is to say, of the more permanent sources of revenue, after the payment of the fixed charges; and 2dly, of the produce of annual duties specially granted and appropriated to the Supply Services. The form then in use of keeping the accounts of revenue in the Exchequer and Treasury books, does not afford the means of showing the amount of arrears of Consolidated Fund receipts paid into the Exchequer subsequently to the Union, with the exception of a balance in the quarter ending 5th April 1801, although doubtless large amounts of such arrears must have been received, as the Consolidated Fund receipts formed by far the larger portion of the revenue. The amounts of arrears of the annual duties, however, are specially distinguished in the Annual Revenue books of the Treasury, and I am thus enabled to furnish an account of these arrears under each head of revenue in Great Britain for each of the years after the Union. It will be seen that this portion alone of the arrears of revenue of Great Britain at the period of the Union, which was subsequently received at the Exchequer, amounted to no less than 10,270,707 *l.*; and this fact appears to warrant the inference that there existed, at 5th January 1801, such large amounts of arrears of assets to meet the outstanding demands, that these last cannot fairly be included in the amount of Public Debt bearing interest.

See Account (B.) appended.

With regard to Ireland, I have shown that, although she is not charged in the Finance Accounts with any estimated amount of outstanding demands of Unfunded Debt at the period of the Union, except Irish Treasury Bills, yet she actually paid no less than 3,406,136 *l.* for liabilities which she had then incurred. It is evident, indeed, that a considerable amount of the expenditure of Ireland, which had been authorised by the Parliament of Ireland previously to the Union, must have remained unpaid on 5th January 1801. The latest account of such arrears of expenditure rendered to the Irish Parliament is printed in the Journals of 1800 (Appendix, p. 890), being an account of the sums remaining unpaid at Lady-day 1800, of grants authorised by Parliament. The following is an abstract of this account:—

	British Currency.		
	£.	*s.*	*d.*
Arrears of grants of 1798	309,115	13	9
Do. Army grants of 1799	915,767	19	2
Do. Miscellaneous ditto	9,701	8	11
£.	1,234,585	1	10

In addition to any arrears of similar expenditure which may have remained unpaid on 5th January 1801, there should be added the very large amounts of liabilities under the grants of the Irish Parliament in 1800, for the following services, viz. :—

	£.	*s.*	*d.*
Compensation for losses by the Union	1,301,538	9	3
Suffering loyalists	212,307	13	11
Inland navigation	458,967	6	9
£.	1,972,813	11	9

I have not been able to find any detailed accounts of the revenue of Ireland, which would enable me to show what amount of arrears were received, subsequently to the Union, to meet these liabilities.

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It has been shown that the balances in the Irish Exchequer, being otherwise appropriated, could not be applied in reduction of the Unfunded Debt in Irish Treasury Bills. A reference to Mr. Corry's Budget of 1st April 1801, will show that these balances were taken as part of the Ways and Means of 1801, applicable to the expenditure of 1801, of which the reduction of debt forms no part. In this respect the practice of estimating the annual Ways and Means in the Budget for Ireland, differed from that for Great Britain, in the Budget of which the Chancellor of the Exchequer, in estimating his Ways and Means for the year, did not include the balances in the Exchequer of Great Britain. This last was the more correct practice, these balances, being appropriated to the services of the past year, remaining unpaid. Indeed, an objection was at once raised in Parliament to Mr. Corry's taking credit in his Irish Budget for his balance in the Exchequer, "as "there were arrears to a very large amount which it had to discharge." (*See* Hansard, Vol. 35, p. 1274.)

The balances of Irish Revenue, at the period of the Union, in the hands of collectors and receivers also, were not and could not be applied in reduction of the Public Debt of Ireland bearing interest. There is this difference between these balances in England and in Ireland, that in Ireland a considerable portion of these balances consisted of balances of deceased and dismissed collectors, and of other arrears that were not recoverable. These irrecoverable balances and arrears of British Revenue amounted, indeed, to so large a sum, that it may be interesting to give at some length an explanatory statement of them, and to show how they were finally disposed of.

The amounts of balances of ordinary revenue in the hands of collectors and of receivers in Ireland, at 1st January 1801, are stated in the Finance Accounts as follows:

	Balances in the hands of the different Collectors.	Balance in the hands of the Receiver-General.	Bills in the hands of the Receiver-General, not due till after 1st Jan. 1801.	Total.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Finance Accounts, Ireland, 1802, p. 55, in Irish Currency	596,234 11 2	24,346 19 4	98,136 6 11	718,717 17 5
Converted into British currency	550,370 7 3	22,474 2 6	90,587 8 –	663,431 17 9

As the balances both of cash and of bills in the hands of the Receiver General would in the ordinary course be paid into the Exchequer soon after 1st January 1801, I will deal here only with the balances in the hands of collectors. No details are given in the Finance Accounts to show what portion of the amount of 550,370 *l.* 7 *s.* 3 *d.* consisted of irrecoverable balances. In the subsequent years after 1801, however, the subject of the large amount of these balances was frequently referred to in Parliament. In the Irish Budget of 20th June 1804, Mr. Leslie Foster said, "Another point that called for serious consideration "was the amount of balances in the hands of collectors. Here, on the immense revenue "of England, there had been a balance of 30,000 *l.* in the hands of the collectors last year, "whereas the balances in Ireland were nearly 600,000 *l.*" The subject was again referred to on 25th June and on 4th July 1804, when Mr. Corry, the late Chancellor of the Exchequer of Ireland, denied that this amount was in the collectors' hands, and stated that "551,000 *l.* was outstanding revenue charged to the collectors, but that they had not "received it;" that "the balances were not cash received, but charges that had not yet "been available; many of these balances arose from insolvent arrears."

It may be seen from the Annual Finance Accounts, that these balances increased in amount from time to time, until, at the close of the year 1816, they were as follows (*see* Account of Public Income of Ireland, for the year ending 5th January 1817. Finance Accounts, Ireland, 1817, p. 2–3):—

Balances and Arrears on 5th January 1817.

	Irish Currency.					In British Currency.
	Balances in the hands of the different Collectors.	Balances due by Deceased and Dismissed Collectors.	Duties not Payable until after 5 Jan. 1817.	Arrears of Inland Excise, Gaugers' Balances, Quit Rents, &c.	Total.	Total.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Customs	15,979 13 7	13,620 19 4	- -	- -	29,600 12 11	27,323 13 6
Excise and Taxes	188,265 3 6	196,764 – 6	55,184 6 2	372,637 5 7	812,850 15 9	750,323 16 1
Stamps	12,283 11 2	90,866 15 2	2,078 14 4	12,628 9 7	117,857 10 3	108,791 11 –
Post Office	8,243 9 5	21,900 18 3	- -	1,038 13 –	31,183 – 8	28,784 6 9
Total £.	224,771 17 8	323,152 13 3	57,263 – 6	386,304 8 2	991,491 19 7	915,223 7 4

The

The amount of 372,637 *l.* 5 *s.* 7 *d.* of Excise arrears, &c., is stated at page 19 of the Finance Accounts to consist of—

	£.	s.	d.
1. Arrear of irrecoverable and insolvent Excise, commencing in the year 1683	203,044	9	1
2. Arrear of insolvent quit rent, increasing annually, as in several instances collectors are charged with quit rent for lands that cannot be found	84,517	9	6
3. Arrear of hearth money, &c., in collection on 5th January 1817	84,775	7	–
TOTAL £.	372,337	5	7

The Stamps arrears of 12,628 *l.* 9 *s.* 7 *d.* are stated at page 31 to consist of—

	£.	s.	d.
1. Arrears of advertisement duty, due by former printers of newspapers	7,185	17	6
2. Cash due by former officers	2,949	8	4
3. Cash due by acting officers	2,493	3	9
£.	12,628	9	7

The Post Office arrears are stated, at page 38, to be insolvent arrears	£.	1,038	13	–

In the Finance Accounts, 1818, which show, at p. 10–11, the account of the public income of Ireland for the year ended 5th January 1818, in British currency, this total amount of balances, 915,223 *l.* 7 *s.* 4 *d.*, remaining at the close of the year ending 5th January 1817, when carried forward to the beginning of the following year, is at once reduced to 114,512 *l.* 16 *s.* 5 *d.*, as follows:—

BALANCES on 5th January 1817, in British Currency.

	Balances in the hands of Collectors. £.	s.	d.
Customs	14,750	9	5
Excise and Taxes	78,469	–	10
Stamps	13,683	18	11
Post Office	7,609	7	3
TOTAL £.	114,512	16	5

The amount of irrecoverable balances and arrears thus struck off as bad debts, appears to have been alluded to by Mr. Vansittart, in his Budget of 20th June 1817, in which he referred to the provisions of the Act 57 Geo. 3, c. 48, "for the clearing up of all accounts, "and discharging all outstanding balances between the English and Irish Exchequers, up "to 5th January 1817," and to the consequently new arrangements of the Finance Accounts." The immediate effect was to write off no less a sum than 800,710 *l.* 10 *s.* 11 *d.* from the amount of these balances. After deducting from this sum the amount of 52,858 *l.* 3 *s.* 6 *d.* (British currency), for duties not payable till after 5th January 1817, and allowing for a portion of 78,254 *l.* 3 *s.* 5 *d.* (British currency), arrears of hearth money, as receivable for revenue, it is clear that nearly 700,000 *l.* was absolutely written off from these arrears and balances, as wholly lost to the Revenue. The whole amount of 800,710 *l.* 10 *s.* 11 *d.* had been previously credited to Ireland as gross revenue received within the year, probably about half a million in various years previously to the Union, and the remaining portion of this amount in the several years from the Union to the consolidation of the Treasuries on 5th January 1817.

It is obvious, therefore, that it is wrong to take the whole amount of these balances, stated to be in the hands of collectors, in reduction of the Public Debt of Ireland, bearing interest. Such portion of the balances in the hands of collectors and receivers on 5th January 1801, as might be received in 1801, as well as the balances of loans, were also actually applicable to the balances of expenditure of 1800 remaining unpaid, exclusive of reduction of debt. So far, indeed, from Ireland being able to apply these balances at 5th January 1801, to pay off her debt in Irish Treasury Bills, although she did reduce during the year the

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amount of bills outstanding by 273,692 *l.* (*see* Appendix, p. 382), yet she was obliged to raise 3,536,088 *l.* by creation of Funded Debt, and to reduce her working balance in the Exchequer by 1,178,749 *l.* (deducting the local appropriated balances, *see* p. 384). Indeed she so far exhausted her balances, that in the following year she was compelled to borrow 276,000 *l.* from Great Britain, to pay the Irish lottery prizes of 1801, due in 1802, which sum she did not repay till 1806, no interest being charged to her.

I trust, Sir, that I have shown sufficient grounds for not having included in the annual charge of the Public Debt, either of Great Britain or Ireland, any interest on these temporary liabilities for demands outstanding, or for making any deduction from this annual charge on account of balances in hand. I am entirely of opinion that such annual charge can be fairly estimated upon that portion only of the Public Debt which bore annual interest, and that any attempt to take into account for this purpose other outstanding demands, or balances in hand, can only lead to confusion and error. This must be more especially the case when such annual charge, so estimated, is continued year by year, for many subsequent years, as has been done, in some of the accounts laid before the Committee last Session.

It is, however, altogether a different question, whether in estimating the *value* of the respective debts of each country, these other outstanding demands, as well as the balances, should not be taken into account. In my account of the value of the Funded and Unfunded Debts of each country, at 5th January 1801 and 5th January 1817, based upon Mr. Finlaison's calculations, which appears at page 410 of the Appendix, neither these outstanding demands nor the balances are included. The account, indeed, purports to show only the value of the Funded Debt and of the Unfunded Debt in Exchequer Bills; and so far it is, I believe, an accurate statement. It appears to me that the principle upon which the amounts of the respective debts thus valued has been calculated, is the only one consistent with the terms of the Seventh Article of the Treaty of Union, in which the debt to be estimated is mentioned as consisting of Capital Debt, bearing interest and annuities, such debt being redeemable by the Sinking Fund.

I admit that, so far as relates to the amount of the Unfunded Debt thus valued, I have not followed the precedents of the accounts appended to the Reports of the Committees from 1811 to 1815, nor that of the Parliamentary Return, No. 353 of 1816, which shows the value of the debts on 1st February 1816. In these accounts the amount of *Unfunded Debt unprovided for* is taken as it appears in the Finance Accounts, including other Supply Services, as well as Exchequer Bills. It should be noticed that the amount thus stated of *outstanding Exchequer Bills unprovided for*, is far less than the *total outstanding amount of Unfunded Debt in Exchequer Bills.* This last amount, indeed, considerably exceeds the total amount of outstanding Unfunded Debt unprovided for. You may remember that, upon my first day's examination before the Committee, I was called upon by Sir Edward Grogan (*Q.* 567 to 578), to give an explanation of the large difference between the amounts of Unfunded Debt in Exchequer Bills, and of Unfunded Debt unprovided for, as shown in the Return, No. 353 of 1816. This explanation was subsequently given by me, and appears at pages 340 and 341 of the Appendix. In that explanation it may be seen that liabilities of Great Britain at 1st February 1816, for Army, Navy, and Ordnance Services, voted but remaining unprovided for, were taken into the account to the amount of 3,847,826 *l.* Now, a reference to the detailed statements in the Finance Accounts, from which the explanation was taken, will at once show that these outstanding demands to this amount were merely *unprovided for by funds which had then been placed at the disposal of the several Departments.* But I shall prove conclusively that *Ways and Means had been provided by Parliament for these liabilities*, nearly the whole amount of which consisted of the Navy debt of 3,694,821 *l.* This amount of Navy debt, and the other demands outstanding at 5th January 1816, are recited in the Budget of 27th May 1816 (*see* Hansard, vol. 34, p. 383), and it is shown that not only were there sufficient Ways and Means provided by Parliament to meet them, but there was an actual surplus of no less than 5,663,000 *l.*, which sum was accordingly carried forward by the Chancellor of the Exchequer, "as a provision for the services of the present year" (1816–17).

It will at once, I think, be admitted, with the knowledge of this fact, that I have done right in not following this precedent. I will, however, now show in a similar form, the respective amounts of Unfunded Debt of Great Britain and of Ireland unprovided for on 5th January 1801 and on 5th January 1817, as they are stated in the Finance Accounts laid before Parliament.

App. No. 6.

AN ACCOUNT of the UNFUNDED DEBT of *Great Britain* and *Ireland* respectively, Provided for and Unprovided for, on 5th January 1801, and on 5th January 1817.

	Provided for.	Unprovided for.	TOTAL.
	£. s. d.	£. s. d.	£. s. d.
ON 5TH JANUARY 1801.			
GREAT BRITAIN.			
(*From Finance Accounts*, 1801, p. 268.)			
Exchequer Bills	5,800,800 – –	20,279,300 – –	26,080,100 – –
Provided for, being charged on Supplies, 1800 £. 11,550,800			
Deduct Estimated Deficiency, per Budget (see p. 4) 5,750,000			
Net amount estimated to be provided for £. 5,800,800			
Army, including Barracks, and Treasury Bills, &c., unsatisfied	– – –	2,022,250 12 3	
Navy	– – –	8,705,886 8 11	
Ordnance	– – –	606,967 19 7	11,812,834 14 11
Miscellaneous	– – –	477,729 14 2	
£.	5,800,800 – –	32,092,134 14 11	37,892,934 14 11
IRELAND (British Currency).			
(*No Statement in Finance Accounts.—From Appendix to Report of* 1811, p. 46.)			
Exchequer Bills (Irish Treasury Bills)	3,976 18 6	1,699,938 9 3	1,703,915 7 9
Loan Debentures	2,478 9 3	– – –	2,478 9 3
Lottery Prizes	25,692 – –	276,923 1 6	302,615 1 6
£.	32,147 7 9	1,976,861 10 9	2,009,008 18 6
ON 5TH JANUARY 1817.			
GREAT BRITAIN.			
(*From Finance Accounts*, 1817, p. 233.)			
Exchequer Bills	11,650,300 – –	33,000,000 – –	44,650,300 – –
Army, including Barracks, and Treasury Bills, &c., unsatisfied	– – –	1,326,663 1 10	
Navy, including Treasury Warrants for Stores	– – –	1,740,181 16 10	
Ordnance, ditto	– – –	842,200 6 9	5,331,788 13 –
Miscellaneous supply, deducting £. 65,000 Sinking Fund on Exchequer Bills	– – –	1,422,743 7 7	
£.	11,650,300 – –	38,331,788 13 –	49,982,088 13 –
IRELAND (British Currency).			
(*From Finance Accounts*, 1817, p. 97.)			
Exchequer Bills (Irish Treasury Bills)	376 18 6	5,304,615 7 8	5,304,992 6 2
Loan Debentures	2,053 17 –	– – –	2,053 17 –
Lottery Prizes	23,615 1 6	– – –	23,615 1 6
£.	26,045 17 –	5,304,615 7 8	5,330,661 4 8

The difference between the amounts of Unfunded Debt thus stated, and the amount stated by me, will be at once seen by placing them in juxtaposition, thus:—

	On 5th January 1801.		On 5th January 1817.	
	Great Britain.	Ireland.	Great Britain.	Ireland.
	£.	£.	£.	£.
Unfunded Debt in Exchequer Bills, as shown at page 410	26,080,100	1,699,938	44,650,300	5,304,615
Unfunded Debt unprovided for, as shown in Finance Accounts	32,092,134	1,976,861	38,331,788	5,304,615

It may here be observed, that in none of the accounts of the value of the respective debts contained in the Reports of the Committees, from 1811 to 1815, and in the Return of 1816, is any deduction made from the Unfunded Debt on account of any balances remaining in hand, as was required to be made in the two accounts at pp. 396 and 397, by the Order of the House of Commons. Attention may, at the same time, be called to the small amount of balance remaining in the Irish Exchequer on 5th January 1817, being 117,503*l.* 12*s.* 9*d.* only, as compared with 13,338,269*l.* 12*s.* 4*d.*, the balance in the British Exchequer.

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I have already shown that the amounts of outstanding demands for the Unfunded Debt, both of Great Britain and Ireland, at 5th January 1801, as stated in the Finance Accounts, were far below the actual liabilities, whilst large arrears of assets were not taken into account at all. I might proceed, also, to show the incompleteness of the similar statements of the outstanding demands for Unfunded Debt of the respective countries at 5th January 1817, particularly as regards Ireland, against which no charge is made for arrears of outstanding demands for supply services, similar to those set down against Great Britain; to state what arrears of Ways and Means remained, which would be available to meet those outstanding demands; and lastly, without bringing forward further instances, to point out that the relative amounts of the liabilities of the two countries would be still further affected by taking into account, to the credit of Great Britain, and to the debit of Ireland, the sums owing to Great Britain by Ireland, viz.:—

	£.	s.	d.
On account of the joint contributions (*see* page 394) -	2,118,865	16	11
On account of advances by way of loan to Ireland, for the charges of the 4,500,000*l.* loan of 1811, amounting, up to 5th January, 1817 (*see* Report of 1815, p. 28), to	1,553,258	11	3

But enough, probably, has been stated, without further exhausting both the subject and your patience, to prove the impracticability, at the present time, of showing with accuracy the total amount of the net liabilities of each of the two countries at the respective periods of the Union, and the consolidation of the Treasuries; and to show conclusively that not only the amounts of the respective debts, and their annual charge, but also their calculated value may be ascertained accurately, and consistently with the terms of the Treaty of Union, in no other way than in the mode adopted, viz., by taking the outstanding amounts of the Funded Debt and of the Unfunded Debt in Exchequer Bills only, without taking into account other outstanding current demands, arrears of incoming revenue, or balances in hand.

Mr. Anderson entirely concurs with me in this view. I beg, therefore, to submit it to you, and to the Committee, as the deliberate opinion of the two financial officers, whose official position and experience may be supposed to qualify them to form a correct judgment upon the subject.

I have, &c.
(signed) *H. W. Chisholm,*
Chief Clerk.

Exchequer, 1 June 1865.

ACCOUNT (A.)

AN ACCOUNT of ARREARS on EXPENDITURE ACCOUNTS of *Great Britain* and *Ireland* respectively at the Period of the Union, on 1st January 1801, as shown by the Actual Payments in the several subsequent Years; excluding the ordinary periodical Charges of Public Debt.

GREAT BRITAIN.

	Paid in 1801. (See Report of 1811, page 73, &c.)	Paid in 1802. (See Report of 1811, page 77.)	Paid in 1803. (See Report of 1811, page 80.)	Paid in 1804. (See Report of 1811, page 83.)	Paid in 1805. (See Report of 1811, page 85.)	Paid in 1806. (See Report of 1811, page 88.)	Paid in 1807. (See Report of 1811, page 90.)	Paid in 1808. (See Report of 1811, page 93.)
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Postponed charges of Funded Debt	342,029 11 7	—	—	—	—	—	—	—
Civil List and other Consolidated Fund charges	288,473 6 6	—	—	—	—	—	—	—
Navy	8,278,970 11 10	—	—	—	—	—	—	—
Ordnance	652,860 8 8	20,621 1 9	66,749 9 –	1,853 14 5	37,899 6 1	798 4 3	14,071 14 5	572 6 3
Army	3,222,973 17 2	801,675 – 10	360,183 13 7	160,086 16 6	10,772 13 11	2,539 10 10	8,359 – –	40,172 3 7
Miscellaneous	39,617 10 10	713,050 1 2	10,041 8 –	3,706 8 –	1,297 2 6	2,594 12 –	—	—
Lottery prizes	500,000 – –	—	—	—	—	—	—	—
* Relief to sufferers, and other expenses arising out of war with America, incurred prior to 1st January 1801	23,736 10 –	46,554 2 6	418,544 7 3	422,258 5 4	414,000 – –	- - -	476 7 6	30,614 9 6
Valuation of Dutch ships which surrendered to Vice-admiral Sir A. Mitchell, at the New Deep, on 30th August 1799	- - -	199,812 14 7	—	—	—	—	—	—
East India expenses during late War	- - -	- - -	1,000,000 – –	—	—	—	—	—
Value of ships, &c., taken at Toulon by Lord Hood, to be distributed among the forces under him	- - -	- - -	- - -	- - -	240,000 – –	10,000 – –	- - -	15,336 14 10
£.	13,348,661 16 7	1,781,713 – 10	1,855,518 17 10	587,905 4 3	703,969 2 6	15,932 7 1	22,907 1 11	86,695 14 2

	Paid in 1809. (See Report of 1811, page 95.)	Paid in 1810. (See Report of 1811, page 98.)	Paid in 1811. (See Report of 1812, page 99.)	Paid in 1812. (See Report of 1813, page 10.)	Paid in 1813. (See Return of 1814, No. 279.)	Paid in 1814, (See Report of 1815, page 32.)	Paid in 1815. (See Return of 1816, No. 337.)	Paid in 1816, (See Appendix, page 352.)
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Ordnance	2,975 18 2	312 18 5	4,186 12 4	201 10 8	943 17 8	- - -	6 18 8	120 12 3
Army	93,394 3 7	117,955 16 7	177,548 17 –	80,075 15 9	25,991 10 –	73,513 7 6	30,789 1 9	14,764 – 9
Miscellaneous	2,216 19 –	—	—	—	—	—	—	—
£.	98,587 – 9	118,268 15 –	181,735 9 4	80,277 6 5	26,935 7 8	73,513 7 6	30,796 – 5	14,884 13 –

RECAPITULATION.

	£. s. d.
Charges of debt postponed in 1800	342,029 11 7
Civil List and other Consolidated Fund charges	288,473 6 6
Navy	8,278,970 11 10
Ordnance	804,174 13 –
Army	5,220,795 9 4
Miscellaneous supply	772,524 1 6
Lottery prizes	500,000 – –
Expenses arising out of war with America	1,356,184 2 1
Valuation of ships surrendered prior to 1801	465,149 9 5
East India Company, for expenses in late war	1,000,000 – –
£.	19,028,301 5 3

* Many of these payments include interest *since* 1801, not separately distinguished.

AN ACCOUNT of Arrears on EXPENDITURE ACCOUNTS of *Great Britain* and *Ireland* respectively, on 1st January 1801, as shown by the Actual Payments in the several subsequent Years; excluding the ordinary periodical Charges of Public Debt.

IRELAND (in Irish Currency.)

	Paid in 1801. (See Report of 1812, page 106.)	Paid in 1802. (See Report of 1812, page 108.)	Paid in 1803. (See Report of 1812, page 109.)	Paid in 1804. (See Report of 1812, page 110.)	Paid in 1805. (See Report of 1812, page 112.)	Paid in 1806. (See Report of 1812, page 113.)	Paid in 1807. (See Report of 1812, page 114.)	Paid in 1808. (See Report of 1812, page 115.)
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Civil List and other Consolidated Fund payments	153,155 3 1	2,960 6 7	12 10 –	415 1 6	—	—	—	—
Payments from Revenue in progress to the Exchequer	7,423 13 5	317 7 5	1,522 14 6	37 7 6	—	—	—	—
Army	508,305 11 5	183,852 5 10	17,998 15 1	11,448 10 6	3,753 7 2	89,851 18 11	39,919 6 6	32,920 17 3
Miscellaneous	116,967 5 3	4,917 10 6	- - -	- - -	731 17 4	679 19 10	807 2 –	—
(*For undermentioned, see Finance Accounts of each year.*)								
Compensations for losses by the Union *	202,725 6 –	760,132 19 1	398,634 12 8	33,456 7 4	5,002 13 1	860 16 8	—	—
Suffering loyalists †	160,063 3 8	30,363 13 –	10,478 3 1	8,378 3 3	524 15 4	—	—	—
Inland navigations, prior to 1800	3,900 – –	- - -	11,400 – –	—	—	—	—	—
Inland navigations, grant of 1800 ‡	21,724 12 6	12,000 – –	52,323 11 11	42,461 12 –	43,418 13 10	74,702 19 7	35,098 11 6	20,488 1 3
Other purposes appointed prior to the Union	50,447 19 9	—	—	—	—	—	—	—
Lottery prizes, shown to be for lotteries prior to 1801, on p. 46 of Report of 1811	297,808 – –	44 – –	1,305 – –	892 – –	604 – –	153 – –	353 – –	477 – –
£.	1,522,520 15 1	994,588 2 5	493,675 7 3	97,089 2 1	54,035 6 9	166,248 15 –	76,178 – –	53,885 18 6

	Paid in 1809. (See Report of 1812, page 116.)	Paid in 1810. (See Report of 1812, page 116.)	Paid in 1811. (See Report of 1812, page 117.)	Paid in 1812. (See Report of 1813, page 9.)	Paid in 1813.	Paid in 1814. (See Report of 1815, page 33.)	Paid in 1815–16. (See Return, No. 337, of 1816.)	Paid in 1816–17.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Army	7,083 8 8	5,184 5 10	7,648 12 2	33 12 5	§ - - -	7,382 15 3	950 – –	—
Miscellaneous	4,778 17 8	- - -	16,356 2 2	49 2 9	- - -	2,250 – –	—	—
Inland navigations, grant of 1800	56,209 1 –	35,169 18 6	10,309 5 7	13,402 1 3	10,309 5 7	28,522 6 9	10,309 5 7	15,154 12 9
Suffering loyalists (*see* Finance Accounts)	- - -	- - -	42 12 6	—	—	—	—	—
Outstanding lottery prizes	44 – –	89 – –	65 – –	72 – –	79 – –	113 – –	42 – –	110 – –
£.	68,115 7 4	40,443 4 4	34,421 12 5	13,556 16 5	10,388 5 7	38,268 2 –	11,301 5 7	15,264 12 9

RECAPITULATION.

	Irish Currency.	British Currency.
	£. s. d.	£. s. d.
Civil List and other Consolidated Fund payments	156,543 1 2	144,501 5 8
Payments from Revenue in progress to Exchequer	9,301 2 10	8,585 13 4
Army	916,333 7 –	845,846 3 5
Miscellaneous supply	147,537 17 6	136,188 16 2
Compensation for losses by the Union	1,400,812 14 10	1,293,057 18 3
Suffering loyalists	209,850 10 10	193,708 3 11
Inland navigations granted prior to 1800	15,300 – –	14,123 1 7
Inland navigations granted in 1800	481,603 19 7	444,557 10 5
Lottery prizes	302,250 – –	279,000 – –
Other purposes, appropriated prior to the Union	50,447 19 9	46,567 7 6
TOTAL £.	3,689,980 13 6	3,406,136 – 3

* £. 1,410,000 voted for payment of these compensations, by resolution of Irish House of Commons of 2d July 1800, and granted by Irish Act, 40 Geo. 3, c. 60, s. 22.

† £. 230,000 granted by Irish Act, 40 Geo. 3, c. 60, s. 3.

‡ £. 500,000 voted 3d July 1800, and granted by Irish Act, 40 Geo. 3, c. 51.

§ Included in next year's calculation, *see* Report of 1815, page 33.

AN ACCOUNT of ARREARS of REVENUE of *Great Britain*, outstanding on 5th January 1801, received at the Exchequer in each subsequent Year from 1801 to 1816 inclusive; so far as can be made out from the Treasury Annual Revenue Books.

	1801.	1802.	1803.	1804.	1805.	1806.	1807.	1808.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Surplus of Consolidated Fund	1,013,804 14 5	—	—	—	—	—	—	—
Arrears of Assessed Taxes	87,635 8 2	49,560 14 6	21,985 5 3	98,760 12 3	28,129 12 7	11,769 9 1	29,603 18 2	2,714 18 4
Income Duty	3,207,424 10 10	390,493 1 –	62,038 10 9	21,531 13 8	7,620 5 11	3,316 10 4	3,622 16 7	385 12 4
Duties on Exports and Imports	990,067 1 4	70,093 8 3	248,858 13 –	—	—	—	—	—
Land Tax	1,105,950 18 1	200,075 16 3	84,030 16 10	29,874 2 3	43,780 5 8	20,818 7 3	8,488 10 6	2,877 17 6
Annual Duties in lieu of Land Tax, &c.	1,194,658 6 2	140,723 18 5	60,924 15 8	18,829 – 11	3,895 19 4	8,639 – 10	5,690 9 10	2,208 16 3
Malt Duties	378,556 – –	13,196 – –	627 – –	—	—	—	—	—
Voluntary contributions	40,302 3 5	5,000 – –	3,500 – –	590 17 9	—	—	—	—
Lottery contributions	175,000 – –	—	—	—	—	—	—	—
Loan, 1800	285,058 9 –	—	—	—	—	—	—	—
£.	8,478,457 11 5	869,142 18 5	481,965 1 6	169,586 6 10	83,426 3 6	44,543 7 6	47,405 15 1	8,187 4 5

	1809.	1810.	1811.	1812.	1813.	1814.	1815.	1816.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Arrears of Assessed Taxes	10,114 6 9	30,035 11 4	9,116 19 10	1,798 10 11	1,403 6 3	31 7 10	34 16 –	—
Income Duty	20,384 1 3	300 – –	7,500 – –	1,400 – –	641 5 –	- - -	100 – –	—
Land Tax	583 16 3	210 11 1	19 3 7	2,016 9 3	829 6 11	17 12 –	59 11 8	159 9 6
Annual duties in lieu of Land Tax	417 15 7	650 – 6	—	—	—	—	—	—
Voluntary contributions, 1798	- - -	- - -	- - -	- - -	- - -	- - -	169 5 9	—
£.	31,499 19 10	31,196 2 11	16,636 3 5	5,216 – 2	2,873 18 2	48 19 10	363 13 5	159 9 6

RECAPITULATION.

	£. s. d.		£. s. d.
1801	8,478,457 11 5	1810	31,196 2 11
1802	869,142 18 5	1811	16,636 3 5
1803	481,965 1 6	1812	5,215 – 2
1804	169,586 6 10	1813	2,873 18 2
1805	83,426 3 6	1814	48 19 10
1806	44,543 7 6	1815	363 13 5
1807	47,405 15 1	1816	159 9 6
1808	8,187 4 5		
1809	31,499 19 10	£.	10,270,707 15 11

Exchequer,
1 June 1865.

H. W. Chisholm,
Chief Clerk.

Appendix, No. 7.

PAPER handed in by Mr. *Chisholm*.

App. No. 7.

Local Taxation of Great Britain and Ireland.

No. 486 of 1843.

In the Report of the Poor Law Commissioners on Local Taxation, presented to both Houses of Parliament in 1843, local taxes are defined as "those compulsory contributions for public or common purposes, which are imposed and levied within certain districts of the country, and are expended within the same districts in which they are levied, and for the especial benefit of those districts."

According to this definition, the following local charges were not referred to by the Poor Law Commissioners as local taxes; viz.:

Tithe rentcharge; Easter offerings, &c.	Not being assessed or collected by a special administrative machinery provided for their imposition and expenditure, and the district not being legally concerned in its distribution.
Tolls on turnpike roads and navigable rivers; fees payable in the local administration of justice, for licenses, &c.	Not being imposed by a common assessment, but only paid by each individual for some benefit to himself.
Rates in boroughs other than those under the Municipal Corporations Act; improvement rates, for inclosures, drainage, defences against rivers or the sea, made under ancient customs or local Acts; parish clerks' rate, &c.	Being rates under a local custom, and not under the general common law or statute.

The Poor Law Commissioners in their Report of 1843 show the state of the law affecting the remaining local taxes then leviable in England and Wales, and give a statement of the introduction and progress of these taxes. They state (p. 16) that there were then no means of ascertaining, with any approach to correctness, the amount of money levied in respect to the greater part of these taxes.

This Report of the Poor Law Commissioners to the Secretary of State for the Home Department is dated 1st June 1843, and signed by "George Nicholls," "George Cornewall Lewis," and "Edmund Walker Head."

Commons, 14, of 1846. Lords (15) 1846.

In 1846, Returns were ordered to be made to both Houses of Parliament of the "Total Amount of Local Taxation in Great Britain and Ireland, as far as can be ascertained from Official Documents." Similar Returns were made to each House in obedience to these orders; and the Return to the House of Lords bears date 9th February 1846, and is signed by Edwin Chadwick, Secretary to the Poor Law Commission. In this Return, tithe rentcharge and Easter offerings are not included as local taxation; but the other local charges, excluded in the Poor Law Commissioners' Report of 1843, are included. This Return of 1846 may be considered as affording the fullest information which could then be given of the amounts of the local taxation of England and Wales, Scotland and Ireland, respectively; but it is so far incomplete and unsatisfactory, that the amounts of several of the heads of local taxation are stated to be "unknown"; and the amounts of other heads to be irreconcileable with each other. When also definite annual amounts are stated, they belong to various years, extending over a period between 1829 and 1844.

Hansard's Debates.

On 8 March 1849, the subject of the local taxation of Great Britain was brought before the House of Commons by Mr. Disraeli, who stated the whole amount to be a burden upon land. He estimated the amount at 10,000,000 *l.*, to which he added 2,000,000 *l.*, the amount of the land tax. By way of relief to the landed interest he proposed that one-half of the local taxation should be contributed from the Consolidated Fund, and that the Government should regain the moiety from other privileged properties according to their quota. He moved accordingly that the House resolve itself into a Committee to consider the subject. The motion was opposed by Mr. C. Wood, the Chancellor of the Exchequer, on the ground that, after adding 2,000,000 *l.* for the local taxation of Scotland, omitted by Mr. Disraeli, the plan would impose 7,000,000 *l.* on the schedules of the Income Tax, then paying 2,000,000 *l.* a year at 7 *d.* in the pound. In the course of the debate, Sir G. C. Lewis estimated the amount of local taxation as follows:—

	£.
England and Wales	10,317,000
Scotland (Poor Rates)	544,000
Ireland	2,500,000
	13,000,000
Land Tax	2,000,000
£.	15,000,000

Mr.

Mr. Disraeli's motion was defeated upon a division, the numbers being 280 against 189; majority 91. App. No. 7.

In 1860, the Act 23 & 24 Vict. c. 51, was passed, which required the several local officers to make annual Returns to the Secretary of State of the sums received for rates, taxes, tolls, and dues levied for local purposes in England. The first annual Returns were directed to be made in June 1861, and abstracts of these Returns were directed to be laid before Parliament by the Secretary of State every year. No further Returns were required in those cases where Returns had previously been required by law, such as the receipts by county treasurers, for poor rates, &c. With these exceptions, the following rates, &c., as well as "any other compulsory rates, taxes, tolls, or dues in England, other than such as are levied for the public revenue of the United Kingdom," are directed by the Act to be included in these annual Returns:

Church rates, and chapel rates, under the common law, or by statute.

Sewers rates, and general sewers tax, and all rates, scots, and taxes levied by courts or commissioners of sewers, under statute, charter, usage, or custom.

Lighting and watching rates, per 3 & 4 Will. 4, c. 90.

Paving, draining, cleansing, or watching rates; or for the improvement or regulation of any town or district, under any local Act.

Rates for local government of the Metropolis, per 18 & 19 Vict. c. 120.

Markets, bridges, or harbours, tolls and dues, levied by statute.

In order to supply full periodical Returns of the local taxation of the United Kingdom, it is desirable that the provisions of the Act of 1860 should be extended to Scotland and Ireland, and that the annual Return to Parliament of local taxation should include an abstract account of all amounts of this description levied for each year, both in Great Britain and in Ireland, not only of the local taxation specified in the schedule to the Act of 1860, but of the local taxation contained in the periodical Returns made under special Acts. Some of these Returns require a summary, showing the total amount under each head of local taxation, to be added to them, to make them practically serviceable. It should be made imperative to furnish such summary in every case.

Fees imposed and levied for the administration of local justice, form a considerable part of local taxation, the amount of which is not returned to Parliament, and does not appear in the total amount of local taxation.

Of several of the separate heads of local taxation both in Great Britain and Ireland more precise information is afforded, for periods before and after the Union, in other papers laid before Parliament, being contained in Reports of Commissions and of Parliamentary Committees and in Special Returns. Amongst these the most important are the Returns furnished in 1839 by Mr. Rickman, on Poor Rates, County Rates, Highway Rates, and Church Rates, in England and Wales; the Report on Irish Poor in 1830, and appended Accounts of the Grand Jury Presentments in Ireland; Lord Monteagle's Draft Report for the Consideration of the Committee on the Burdens on Land in Great Britain and Ireland, printed in 1846; as well as the Report of this Committee and the various Appendices, &c. &c. There are also periodical Returns made to Parliament furnishing information of various heads of local taxation, as:— 562 of 1839; reprinted 17 of 1846; 667, 589, and 665 of 1830; 449 of 1846; 411 of 1846.

The Annual Reports of the Poor Law Board in England and Wales from 1835;

Ditto - - - - ditto - - - - - - in Scotland from 1847;

Ditto - - - - ditto - - - - - - in Ireland from 1848;

Abstracts of the Annual Accounts of the County Treasurers in England and Wales from 1841;

Abstracts of Annual Accounts of Grand Juries, Ireland, from 1824;

Abstracts of Annual Income and Expenditure of Turnpike Trusts in England and Wales from 1836; and of Highways from 1852;

Abstracts of Accounts of the Receipt and Expenditure of Municipal Boroughs in England and Wales from 1837 (these have not been printed since 1855); and in Ireland from 1843;

Accounts of the Receipt and Expenditure for the Metropolitan Police from 1830;

Annual Accounts of the Chamberlain of London from 1813;

Annual Pilotage Accounts from 1856; and others.

The following Account is prepared from these various sources:—

AN ACCOUNT of the Amount of LOCAL TAXATION of all kinds in *Great Britain* and in *Ireland*, in 1801, 1817, 1845, and 1863–64, so far as it can be furnished.

The only heads of Local Taxation for the earlier Years, 1801 and 1817, the Amounts of which appear to have been returned to Parliament, are the following:

	1801.		1817.	
ENGLAND AND WALES:		£.		£.	
Poor's rate, including County rate	(1802–3)	5,348,205		8,128,418	(No. 471, Session 1846).
Church rates			(earliest year, 1826)	564,388	,,
Highway rates			(average, 1812–13–14)	1,415,800	,,
IRELAND:					
Grand Jury Presentments for county expenditure.	(1800)	277,493		738,154	(Appendix to Report on Irish Poor, 1830).
Paving, lighting, and cleansing Dublin.				33,383	(No. 245, Session 1824).

	1845.				1863–64.		
	Per Mr. Chadwick's Return, No. 14, Session 1846.		Corrected by Subsequent Returns.				
ENGLAND AND WALES:		£.		£.		£.	
Church rates	(1839)	506,812				236,174	
Sewers rate						35,796	
City of London sewers	(estimated)	75,000				16,630	
Drainage and embankment rate	unknown					140,692	
Lighting, &c.	unknown					36,837	
Local management of the Metropolis.						862,721	
Local management, Main Drainage						132,618	
Markets and fairs						45,116	Local Taxation, No. 524, Return, 1864.
Bridges and ferries						124,056	
Harbours	(approximate)	525,000				1,047,745	
Burial Boards							
Local Boards						537,224	
Poor's rate, including county and police		6,900,117		* 6,800,623		9,174,976	* Poor Law Report, 1864.
Borough rate					(1854)	311,953	
Metropolitan Police rate			(No. 20, 1846)	194,770		347,182	
Highway rate, including value of labour in lieu of rates.	(1839)	1,169,891	(No. 122, 1849)	1,569,761	(1861–62)	1,550,730	Annual Return, per Act, 12 & 13 Vict. c. 35.
Turnpike tolls	(1843)	1,348,084	(No. 695, 1847)	1,355,847	(1861)	1,105,950	Annual Return, per 3 & 4 Will. 4, c. 80.
Trinity House, pilot and light dues	(1843, light)	243,023				374,115	No. 416, Session 1864.
City of London consolidated rate						412,815	Local Taxation Return, 1864.
Ditto tolls and dues	(1841)	188,521		—		—	
Borough tolls and dues	(1843)	172,911		—		—	
Fees for administration of local justice.	(1834)	57,668		—		—	
TOTAL £.		11,187,027				16,494,330	
Add excess of corrected Sums		502,909					
£.		11,689,936					
SCOTLAND:							
Poor's rate, including voluntary assessment and kirk collections.	(1841)	218,481	(1st Report, Poor Law Board, 1847.)	306,044		776,455	Report, 1864.
County statute labour rate, including value of labour.	unknown		(No. 303, 1850)	78,823		—	
Prison rates	(1843)	36,000				32,171	Report of Prison Managers, 1864.
Ditto, for building	(1842)	47,290				301	
Other county and local rates, including police rate.						277,543	No. 113, 1865.
Turnpike tolls			(No. 568, 1850)	266,226	(1861)	226,331	Annual Return, per 3 & 4 Will. 4, c. 80.
Burgh cess	(1829)	8,777		—		—	
Rural police	unknown			—		—	
Borough police	unknown			—		—	
Rogue money rate	unknown			—		—	
Light dues	(1843)	44,117			(1861)	26,576	No. 219, 1862.
Port dues		176,000		—		—	
Pilot dues						15,168	No. 416, 1864.
TOTAL £.		530,665				1,354,545	
Add, excess of corrected sums		432,612					
£.		963,277					

	1845.		1863-64.	
	Per Mr. Chadwick's Return, No. 14, Session 1846.	Corrected by Subsequent Returns.		
IRELAND:	£.	£.	£.	
Poor rates	(1844) 256,658	(No. 319, 1852) 295,781	(1862-63) 723,843	Report of Irish Poor Law Board, 1864.
Grand Jury Presentments for county expenditure.	(average, 1841-42-43). 1,158,198	(App. to Lords' Report on Burdens on Land, 1846). 1,141,542	1,962,732	Annual Return, No. 238, 1864.
Turnpike tolls	—	(1849) 21,308	—	
Parish cess (abolished per 27 & 28 Vict. c. 17).	—	—	—	
Town rate, per 17 & 18 Vict. c. 103.			unknown.	
Borough rate	—	—	—	
Ditto, on certain municipal boroughs.			143,016	No. 539, 1864.
Police tax, Dublin, &c., in aid of police expenditure.		(Estimates, 1845) 32,000	29,700	Estimates, 1863.
Light dues	(1843) 53,335		(1861) 19,107	No. 219, 1862.
Port dues	93,000	—	—	
Pilot dues			16,994	No. 416, 1864.
Tonnage dues, Port of Dublin			29,472	No. 214, 1864.
Quay wall dues			6,400	No. 214, 1864.
TOTAL £.	1,561,191		2,031,264	
Add, excess of corrected sums	75,775			
£.	*1,636,966			

Turnpike tolls in Ireland are not stated by Mr. Chadwick amongst the local rates of Ireland. Under sect. 38 of the Act 20 & 21 Vict. c. 15, passed to carry out the recommendations of a Royal Commission appointed to inquire into the subject, tolls on turnpike roads in Ireland were abolished from 5 April 1858, from which period the several expenses of maintaining, as well as satisfying debts due from turnpike trusts, were to be defrayed from Grand Jury Presentments. There appears to be no Return to Parliament showing the amount of tolls received on turnpike roads in Ireland between the years 1831 and 1849. Their amount in 1849 is stated in the Return, No. 137 of 1852, to be 21,308 *l.* This Return was made in pursuance of the Act 13 Vict. c. 4, under which, annual abstract accounts of turnpike roads and bridge trusts were to be laid before Parliament.

It appears by the same Return that the amount of bridge tolls received in Ireland in 1849 was 9,695 *l.* Under the Act 14 & 15 Vict. c. 21, grand juries in Ireland were empowered to make presentments for the purchase of bridge tolls, and after such purchase, the tolls were to cease.

RECAPITULATION.

	1845.	1863-4.
	£.	£.
TOTAL, ENGLAND AND WALES	11,689,936	16,494,330
„ SCOTLAND	963,277	1,354,545
„ GREAT BRITAIN	12,653,213	17,848,875
„ IRELAND	1,636,966	2,031,264
„ UNITED KINGDOM	14,290,179	19,880,139

* In "Thom's Directory for 1851," p. 194, under the head of Statistics of Ireland, the amount of local rates, both general and special, with the turnpike tolls and port and light dues, in 1845, or the nearest year, are stated in detail, to the amount of 1,831,287 *l.* The relative total amounts of local taxation of England and Scotland, are also stated, as follows:—

	£.	Proportion per Cent.
England	11,409,079	
Scotland	956,678	
Great Britain	12,365,757	87·1
Ireland	1,831,287	12·9
TOTAL £.	14,197,044	

It may be added, that much valuable statistical information as to the local taxation of Ireland, as well as of Great Britain, is contained in Mr. Thom's annual directories, and has afforded much assistance in compiling this account of the local taxation of the United Kingdom; but the amounts here stated are in every case taken from Parliamentary Returns.

App. No. 7.

In order to make a just comparison of the relative proportions per cent. of the amount of local taxation thus levied in Great Britain and Ireland respectively, in 1845 and 1863, those heads should be excluded from the total of Great Britain, the amounts of which, though levied in Ireland, are unknown. Thus, the amount of the town rates in Ireland, under the Act 17 & 18 Vict. c. 103, which provides for the expenses of lighting, paving, sewerage, &c., as well as of the borough rates, not being ascertained and returned to Parliament, the amounts of similar local rates in Great Britain should fairly be excluded. Again, harbour, port, pilot, and light dues, though locally collected, are not levied upon and paid by the local inhabitants, and may be more properly excluded from the comparison. After these deductions, the relative proportions per cent. of the local taxation of the two countries may therefore be stated as follows:—

Proportionate Local Taxation.

	1845.		1863–64.	
	Amount.	Proportion per Cent.	Amount.	Proportion per Cent.
England and Wales:	£.		£.	
Church rates	506,812		236,174	
Poor rates, including county rate and county police rate.	6,800,623		9,174,976	
Metropolitan police rate	194,770		347,182	
City of London police rate	28,624		37,040	
Highway rate, including value of labour in lieu of rates	1,569,761		1,550,730	
Turnpike tolls	1,355,847		1,106,950	
£.	10,456,437		12,453,052	
Scotland:				
Poor rates	306,044		776,455	
County statute labour rate, including value of labour	78,823			
Prison rates	83,290		310,015	
Other county and local rates, including police rate				
Turnpike tolls	266,226		226,331	
£.	734,383		1,312,801	
Total, Great Britain £.	11,190,820	88·24	13,765,853	88·34
Ireland:				
Poor rates	295,781		723,843	
County cess	1,141,542		1,062,732	
Police tax, Dublin	32,000		29,700	
Turnpike tolls	21,308		—	
Total Ireland £.	1,490,631	11·76	1,816,275	11·66

Exchequer, 3 May 1865.

H. W. Chisholm, Chief Clerk.

Appendix No. 8.

PAPER delivered in by Mr. *Chisholm*.

Grants in Aid of Local Taxation.

App. No. 8.

An Account of the Grants in Aid of Local Taxation in *Great Britain* and in *Ireland*, in the Years 1801, 1817, 1845, and 1863–64.

Before stating the amounts of what may be more strictly termed Grants in Aid of Local Taxation in the two countries, certain grants may be first noticed, in regard to which it may be doubted whether they should justly be included under this head.

Grants for Charitable or Literary Purposes, and for the Encouragement of Agriculture and Commerce.

The Seventh Article of the Treaty of Union provides "that a sum not less than the sum which has been granted by the Parliament of Ireland on the average of six years immediately preceding 1 January 1800, in premiums for the internal encouragement of agriculture or manufactures, or for the maintaining institutions for pious and charitable purposes, shall be applied for the period of 20 years after the Union, to such local purposes in Ireland in such manner as the Parliament of the United Kingdom shall direct."

The Fifth Report of the Finance Committee of 1817 shows the effect of this provision in each year, from 1801 to 1817, the result of which appears to be as follows: — Reprinted, No. 209, 1827.

	BRITISH CURRENCY.		
	Average of Six Years preceding 1800.	Sums Voted in 1801.	Sums Voted in 1817.
	£.	£.	£.
Hospitals and Schools	43,647	67,462	167,481
Linen manufacture	19,938	19,938	19,938
Dublin Society	5,077	9,231	9,231
Board of First Fruits	4,616	4,616	27,698
Farming Society (date of first grant, 1801)		1,846	4,540
Cork Institution (ditto 1808)			2,308
Inland Navigations as applying to agriculture			4,277
£.	73,278	103,093	235,468

With respect to the grants for charitable institutions, the Committee remarked that many of them appeared to be of very doubtful advantage to those classes of society in whose favour they had been established. Nevertheless, they did not suggest any reduction in the amount of the grants, understanding that the people of Ireland had been accustomed to look at them, not only as affording a valuable relief to many cases of great distress, but as proving the liberal disposition of Parliament towards Ireland, when they certainly far exceeded anything of a similar nature in Great Britain.

In addition to these grants annually voted, a permanent grant of about 3,000*l.* a year, Irish currency, was allowed for public infirmaries in Ireland both before and after the Union.

The Committee on Irish Poor, in 1830, observed in their Report that they saw no sufficient reason why this grant to county infirmaries should be continued and recommended that the sum should be included in the amount of the Grand Jury Presentments; that aid from the public purse should be in such matters reserved exclusively for loans and advances, and for cases in which local funds were inadequate to the immediate discharge of a necessary duty. This recommendation has not been carried out, and the annual grant is still continued.

In the Return, No. 194 of 1834, will be found accounts of the amount of grants for Charitable and Literary Institutions, for the encouragement of Agriculture and Commerce, and for Public Works and employment of the Poor, in Ireland, in each year from 1801 to 1834.

App. No. 8.

The amounts of Grants for Great Britain in 1801 and 1817, similar to those for Ireland, provided for in the Treaty of Union, were as follows:—

	1801.	1817.
	£.	£.
Vaccine Establishment	—	—
Veterinary College	1,500	3,000
Board of Agriculture, for premiums	800	3,000
Encouragement of Hemp and Flax	6,336	2,957
Fisheries Board, Scotland	2,000	2,000
£.	10,636	10,957

The following Account shows the amounts of Grants for similar purposes, including Education, for Great Britain and for Ireland respectively, in 1845 and 1863–64:—

	GREAT BRITAIN.		IRELAND.	
	1845.	1863–64.	1845.	1863–64.
	£.	£.	£.	£.
Public Education	75,000	804,002	75,000	306,016
Science and Art Department* (including Royal Dublin Society, &c.)	-	53,091	-	12,072
Universities	13,926	25,405	-	2,296
Queen's College, Ireland	-	-	-	25,800
Maynooth	-	-	7,065	26,360
Royal Irish Academy	-	-	446	500
Royal Hibernian Academy	-	-	300	included in "Science & Art."
Belfast Professors	-	-	2,100	2,500
National Gallery	-	16,028	1,500	500
British Historical Portrait Gallery	-	1,500	—	—
Scientific Works and Experiments	-	7,141	—	—
Geographical Society	-	500	—	—
Royal Society (London and Dublin)	-	1,000	5,910	included in "Science & Art."
Refuge for the Destitute	3,000	325	—	—
Fishery Board, Scotland	-	10,088†	—	—
Trustees of Manufactures, Scotland	2,000	2,000	—	—
Public Infirmaries, Ireland	-	-	3,252	2,451
Westmoreland Lock Hospital	-	-	2,500	2,600
Rotunda Lying-in Hospital	-	-	1,000	700
Coombe Lying-in Hospital	-	-	-	200
Cork-street Fever Hospital	-	-	3,500	2,500
Meath Hospital	-	-	-	600
St. Mark's Ophthalmic Hospital	-	-	-	100
Dr. Steeven's Hospital	-	-	1,500	1,300
Board of Superintendence of Hospitals.	-	-	-	245
Concordatum Fund and other Charities, &c.	-	-	7,340	8,847
House of Industry, Dublin	-	-	13,029	7,600
Female Orphan House	-	-	1,000	—
Hospital for Incurables	-	-	500	—
Expenditure relative to Private Lunatic Asylums.	-	-	121	—
£.	93,926	921,080	126,063	403,187

* Exclusive of 57,719 *l.* for the United Kingdom generally.

	£.
† Grant for Fishery Board	14,744
Deduct Branding Fees, paid into the Exchequer in the year 1863–64	4,656
£.	10,088

Grants for Courts of Justice.

The expenses of Courts of Justice paid out of the Public Revenue, are not included in the following account of Grants in Aid of Local Taxation, as being generally of the character of Imperial expenditure, with the exception of the Grants for County Courts in England and Wales, and for similar Local Courts in Scotland and Ireland, including the grants for Revising Barristers, the charges of which heads of Local Expenditure appear to be partly defrayed from local taxation, as will be shown hereafter.

Grants and Advances by way of Loan for Public Works.

Grants in aid of local taxation for Public Works are not included in the preceding account, such grants, though frequent and often large in amount in the earlier years of the period from 1801 to 1864, having been gradually discontinued by the introduction of a more regular system of advances by way of loan for Public Works, both in Great Britain and in Ireland.

At the period immediately succeeding the Union, the principle generally adopted in affording the aid of the State by grants for roads, bridges, canals, harbours, or other Public Works, was to make such grants dependent on sums raised locally. This principle was acted on in 1802–3 in Scotland, for making Highland roads and bridges, the amounts of grants being met by an equal levy on the districts improved. In 1817 it was stated in evidence, by Mr. Telford, that about 200,000 *l.* had been so granted in 15 years for Highland roads and bridges, and that it had been the means of advancing the country at least 100 years.

Report on Irish Poor, 1830, p. 37.

In Ireland during the same period, although the large expenditure for post roads was defrayed principally from advances from the Public Revenue to be repaid, yet very considerable sums were granted for inland navigations and other public works; but for want of proper supervision and control, great abuses appear to have existed in the execution of the works, and in the due application of the money advanced and granted.

In consequence of the success of the Scotch system its introduction into Ireland was strongly recommended by various Committees, for providing the necessary means to defray the expenditure of the various descriptions of Public Works. It was also recommended that loans should be advanced, on sufficient security, to be repayable at fixed periods. It was contemplated by the Committee on Irish Poor, in 1830, that in most cases an advance upon the security of local taxes would be fully sufficient, and this anticipation has been since fulfilled.

p. 40.

The amounts of grants and advances by way of loan for Public Works in Great Britain and Ireland respectively, from the period of the Union, have been shown in detail in various Returns made to Parliament.

The Commons Return, No. 160 of 1839, shows in detail the amounts advanced by way of loan, out of Exchequer Bills for Public Works, in Great Britain, in each year from 1817, when the system was commenced; together with the sums repaid for principal and for interest. The Return was moved for by the Chancellor of the Exchequer.

The Return of 1839 was continued in No. 152 of 1842, on the motion of Mr. Forster.

The Return, No. 305 of 1842, shows also in detail, the amounts advanced for Great Britain, in each year from 1800, either by way of loan or grant, exclusive of the advances by way of loan out of Exchequer Bills for Public Works. In this Return the amounts are stated as they were actually issued from the Exchequer, but the issues by way of loan, or grant, are not separately distinguished. This and the under-mentioned returns were moved for by Mr. John O'Connell.

The first return of advances by way of loan for Public Works in Ireland, in each year since the Union, and of repayments is No. 718 of 1847, the summary being shown at page 124. It is stated at page 149 that it was found to be impossible to distinguish, to a large extent, whether the advances were, or were not made as loans to be repaid; the amounts of the issues are therefore stated in the Return. The amounts of advances by way of loan, and of repayments for Public Works in Great Britain are also shown in a similar form.

The Return of 1847 was continued up to 1853, in No. 461 of 1854.

Since 1854, annual accounts have been returned to Parliament of the advances and repayment for Public Works in Great Britain and Ireland, and will be found in the Finance Accounts.

With these exceptions, the Grants out of the Public Revenues which appear to be more strictly in aid of Local Taxation are as follows:—

AN ACCOUNT of the Amounts granted out of the PUBLIC REVENUE in aid of LOCAL TAXATION, for *England* and *Wales*, *Scotland*, and *Ireland* respectively, in each of the Years 1801, 1817, 1845, and 1863–64.

	ENGLAND AND WALES.				SCOTLAND.			
	1801.	1817.	1845.	1863–64.	1801.	1817.	1845.	1863–64.
	£.	£.	£.	£.	£.	£.	£.	£.
Law charges and criminal prosecutions, including Sheriffs' expenses	2,271	24,000	173,220	215,419	- -	* 4,640	64,917	65,913
County Courts, England, and Sheriffs' Courts, Scotland	- -	- -	- -	251,410	- -	- -	34,101	70,134
Prisons and convict establishments at home, including Queen's Prison	45,317	89,700	69,736	298,009	- -	- -	8,172	19,232
Maintenance of prisoners in county gaols, &c.	- -	- -	- -	220,746	—	—	—	—
Removal of convicts	- -	- -	10,000	8,900	- -	- -	- -	400
Transportation of convicts	- -	- -	- -	37,133	—	—	—	—
Police, counties and boroughs, Great Britain	- -	- -	- -	193,000	- -	- -	- -	35,050
Metropolitan police, London, including police courts	19,674	29,310	137,194	184,777	—	—	—	—
Revising Barristers, England and Wales	- -	- -	17,850	17,850	—	—	—	—
Salaries of auditors of Poor-law Unions	- -	- -	- -	17,100	—	—	—	—
One-half salaries of Poor-law medical officers	- -	- -	- -	96,000	- -	- -	- -	10,000
Schoolmasters, &c., in Workhouse and District Schools	- -	- -	- -	32,300	—	—	—	—
Superintendence of county roads, South Wales	- -	- -	563	1,222	—	—	—	—
Rates for Government property	- -	- -	- -	27,000	—	—	—	—
£.	67,262	143,010	408,563	1,600,866	- -	4,640	107,190	200,729

	GREAT BRITAIN.				IRELAND.			
	1801.	1817.	1845.	1863–64.	1801.	1817.	1845.	1863–64.
	£.	£.	£.	£.	£.	£.	£.	£.
Law charges and criminal prosecutions	2,271	28,640	238,137	281,332	25,385	25,385	69,109	61,134
County and Sheriffs' Courts, Great Britain, and Civil Bill Courts, Ireland	- -	- -	34,101	321,544	- -	- -	15,028	18,862
Prisons and convict establishments, including Queen's Prison and Four Courts, Marshalsea	45,317	89,700	77,908	317,241	- -	- -	14,511	44,926
Maintenance of prisoners in county gaols, &c.	- -	- -	- -	220,746	- -	- -	- -	30,797
Removal of convicts	- -	- -	10,000	9,300	- -	- -	- -	1,200
Transportation of convicts	- -	- -	- -	37,133	9,267	7,384	—	—
Police, counties and boroughs, Great Britain	- -	- -	- -	228,050	—	—	—	—
Irish constabulary	- -	- -	- -	- -	- -	- -	277,831	686,962
Metropolitan police and courts, London and Dublin	19,674	29,310	137,194	184,777	- -	- -	34,600	48,100
Revising Barristers, England and Wales, and Dublin	- -	- -	17,850	17,850	- -	- -	800	420
Salaries of auditors of Poor-law Unions	- -	- -	- -	17,100	- -	- -	- -	2,400
One-half salaries of Poor-law medical officers	- -	- -	- -	106,000	—	—	—	—
Schoolmasters, &c. in workhouse and schools	- -	- -	- -	32,300	—	—	—	—
Superintendence of county roads, South Wales	- -	- -	563	1,222	—	—	—	—
Rates for Government property	- -	- -	- -	27,000	—	—	—	—
Cleansing, lighting, and paving Dublin	- -	- -	- -	- -	9,231	—	—	—
£.	67,262	147,650	515,753	1,801,595	43,883	32,769	411,379	894,801

* The Civil Expenditure of Scotland is imperfectly shown under these heads in the years 1801 and 1817.

Criminal Prosecutions and Removal of Convicts.

At the period of the Union, and for many subsequent years, no further grants out of the public revenue appear to have been made for criminal prosecutions and other law charges in England and Wales, beyond the amount of the charges incurred by the Government officers.

In 1825 the Committee on County Rates, considering the hardship of throwing the expenses of prosecutions in great part on the county rates, recommended that the expenses of prosecutions over which the magistrates had no control should be paid out of the public revenue, and that those expenses which the magistrates could order and check should be paid out of the county rates, so that the expense of prosecutions at the sessions would fall on the counties, and that at the assizes on the general funds of the country.

This recommendation was not then acted on; but in 1834 Lord Althorp, then Chancellor of the Exchequer, moved for a Committee to inquire into the county rates, with the view of affording relief from these local burdens.

The Committee made their Report the same Session, and recommended that the expenses of prosecutions at the assizes should be transferred from the county rates to the public revenues, and that the county rates should also be relieved from the charge of conveying prisoners under sentence of transportation, from gaols to depôts for convicts.

This relief was proposed for England and Wales only. It was considered by the Committee that as the charges of administering criminal justice both in Scotland and in Ireland, were already mainly borne out of the public revenues, there was no injustice to these countries in the limited application of the same principle to England and Wales.

A Committee of the House of Lords, in the same year, upon County Rates, in their First Report, stated that the county charges for prosecutions in England and Wales had increased from 34,218 *l.* in 1792 to 157,119 *l.* in 1832. They attributed this increase of 359 per cent. to the operation of the Act 58 Geo. 3, c 70, which repealed the Act granting rewards out of the public revenues for expenses of prosecutions, and provided that the county rates should in future be charged with the allowances to prosecutors; and they also recommended the transfer to the public revenue of the expenses of prosecutions at assizes, and conveyance of convicts from prisons to places of embarkation.

In pursuance of these recommendations, the first annual grant was made in the following year, and 110,000 *l.* was voted to defray certain charges theretofore paid out of the county rates in England and Wales. Of this amount, 80,000 *l.* was estimated as sufficient to relieve the counties and such boroughs as might have quarter sessions and in which the cost of criminal prosecutions was paid by a borough rate in the nature of a county rate, from the charges of one-half of the expense of criminal prosecutions at the assizes and quarter sessions, and 30,000 *l.* from the charge of the whole expense incurred for the conveyance of prisoners under sentence of transportation to the depôts for convicts.

In Scotland, the expenses of criminal prosecutions, together with other law charges, were formerly paid out of the hereditary revenues of Scotland. At the accession of King William the Fourth, those revenues having been surrendered, provision was made on the Consolidated Fund for such of the charges as were of a permanent character, and the remainder were transferred to the Estimates in Supply.

In 1846, the late Sir Robert Peel, in his speech of 27 January, upon the abolition of the corn laws, alluded to the expenses of criminal prosecutions at assizes and sessions, of which, in England, one-half of the charge was paid out of the public treasury, in Scotland the whole charge was so paid, and in Ireland a portion was borne by the land. He proposed that both in England and Ireland the whole amount should be borne by the public treasury; and he estimated the annual relief to the local rates at 100,000 *l.* for England and Wales, and 17,000 *l.* for Ireland.

It appears from the Report of Mr. Macartney's Committee of 1858, that whilst this proposition was so far carried out that the whole charge of criminal prosecutions in Great Britain had since been defrayed out of the annual Votes, yet as regarded Ireland, although 18,000 *l.* had been annually granted for this purpose in 1847, 1848, and 1849, yet no portion had been expended in relief of the local rates. It appeared, however, from the evidence before the Committee, that the whole amount had been expended for the purpose for which it was intended, under the head of Law Charges in Ireland, for charges of criminal prosecutions paid by the Crown solicitors; that the special Vote of 18,000 *l.* had accordingly been discontinued in 1850, the whole charge being thenceforward included in the estimate for law charges. The Committee therefore made no further recommendation upon this subject, except that, under Treasury Regulations, such costs of prosecutions as were paid in England and Scotland from the Parliamentary Vote should also be paid in Ireland.

The following Statement will show that this recommendation has been carried out:—

App. No. 8.

STATEMENT of GRANTS for CRIMINAL PROSECUTIONS in *Great Britain* and *Ireland*, for 1864–65 and 1865–66, from the Estimates of the present Session.

	1864-65.	1865-66.
GREAT BRITAIN:	£.	£.
Law charges, including prosecutions relating to the Crown - -	43,296	34,115
Criminal prosecutions at assizes and quarter sessions, sheriffs' expenses, &c. - - - - - - - - - - -	198,033	194,923
	241,329	229,038
SCOTLAND:		
Law charges and criminal prosecutions - - - - - - -	64,750	63,713
TOTAL Great Britain - - - £.	306,079	292,751
IRELAND:		
Law charges and criminal prosecutions, including 14,000 *l.* for the repayment to counties and boroughs of the expenses of prosecutors and witnesses, which previously to 1 April 1859 were provided for by Presentment - - - - - - - - - £.	73,637	61,134

COUNTY COURTS IN ENGLAND AND WALES, AND SIMILAR LOCAL COURTS IN SCOTLAND, AND IN IRELAND.

IT has been already stated (page 3) that the expenses of courts of justice paid out of the public revenues, are generally of the character of Imperial expenditure. The grants for County Courts in England and Wales, and for similar local courts in Scotland and in Ireland, are, however, exceptional cases, as large amounts of local taxation are raised by fees received in respect of proceedings in these courts, which in England and Wales are applied towards the salaries of certain officers of the county courts, whilst the fees in Scotland and Ireland are paid into the Exchequer.

COUNTY COURTS.

COUNTY Courts were established in England under the Act 9 & 10 Vict. c. 95, passed in 1846, and entitled "An Act for the more easy Recovery of Small Debts and Demands in England." Under sect. 38, compensation to persons whose rights or emoluments were diminished under the operation of the Act, was made by an annual grant out of the Consolidated Fund. Under sect. 37, certain fees were made payable on every proceeding in the county courts, to form part of the general fund of each court. Under sect. 39 and following sections, the salaries and expenses were made payable out of the general fund, any surplus remaining part of the general fund, and any deficiency being made payable out of the Consolidated Fund.

This Act and subsequent Acts were amended in 1856 by the Act 19 & 20 Vict. c. 108. The salaries of the county court judges were charged upon the Consolidated Fund by sect. 80. Under sect. 84, the salaries of the registrars and high bailiffs were charged upon the produce of the fees, the deficiency to be made good by an annual vote, and any surplus to be paid to the Consolidated Fund. By sect. 85, other expenses of the county courts were to be provided for by an annual vote.

In 1863–64, the amounts charged were as follows:—

		£.
On the Consolidated Fund	Compensation, per 9 & 10 Vict. c. 95 - -	9,400
	Salaries of the judges - - - - -	76,000
On Supply Votes - - -	Estimated deficiency of fees for salaries of registrars and high bailiffs - - - -	44,000
	Other expenses - - - - - -	122,010
	£.	251,410

The estimate of the deficiency of fees was formed upon the following statement for the year 1862:—

	£.	£.
Salaries of registrars - - - - - -	184,462	
Salaries and allowances of high bailiffs - - -	131,112	
		315,574
Total of fees received in courts - - - - - -		267,137
Deficiency - - - £.		48,437

The

The actual amounts for the year 1863 appear in the Estimates of 1864–65, as follows:— App. No. 8.

	£.	£.
Salaries of registrars - - - - - -	176,605	
Salaries and allowances of high bailiffs - - -	129,639	
		306,244
Total of fees received in courts - - - - - -		266,069
Actual Deficiency - - - £.		40,175

Sheriffs' Courts, &c., Scotland.

The proceedings in Sheriffs' Courts, Scotland, are regulated by the Act 1 & 2 Vict. c. 119, passed in 1838. In these courts both civil and criminal business is executed, and the expenditure for these courts out of the public revenue, including the salaries of sheriffs and sheriffs' clerks, is applicable to both descriptions of business without distinction. The salaries of the procurators fiscal are for criminal business only. Return, No. 160, of 1865.

Under sect. 119 of this Act, certain fixed fees for civil business in the Sheriffs' Courts were imposed towards the salaries and expenses.

Previously to the passing of the Act 17 & 18 Vict. c. 94, the deficiency of the fund for payment of these salaries and expenses was provided out of the gross revenues of Scotland. Under this Act, and subsequent Act 19 & 20 Vict. c. 59, the salaries of the sheriffs and certain of their clerks were charged upon the Consolidated Fund, and other salaries and expenses were to be provided for by annual votes.

Under sect. 7 of the Act 17 & 18 Vict. c. 94, provision was made for carrying the fees applicable to the payment of these charges to the Consolidated Fund, in which case the entire charges were to be provided for out of monies to be granted by Parliament.

Amongst the sheriffs' expenses is included the remuneration for registering and revising Lists of Voters, under sect. 41 of the Reform Act for Scotland, 2 & 3 Will. 4, c. 65.

Under sect. 15 of the Act 23 & 24 Vict. c. 79, one half of the expenses of erecting or improving Sheriff Court-houses in Scotland, was to be defrayed out of the Votes of Parliament, and the other half by assessment.

The grants for procurators fiscal and sheriffs' expenses are included under the head of law charges, &c. for Scotland, and the net remaining charge on the public revenue, in respect of the Sheriffs' Courts, Scotland, for 1863–64, was as follows:—

		£.	s.	d.
On the Consolidated Fund	Salaries of Sheriffs, Scotland - -	53,295	10	–
	,, Sheriffs' clerks - - -	5,275	1	8
On Supply Votes - - -	,, ditto ,, - - -	15,380	–	–
	Sheriff Court-houses - - - -	6,000	–	–
		79,950	11	8
Deduct fees received from sheriffs' clerks, and paid into the Exchequer, for the year 1863–64 - - - - - - - (*See* Return No. 160 of 1865.)		9,816	10	1
		70,134	1	7

Salaries of Chairmen of Quarter Sessions, and Process Servers, in Ireland.

The salaries of Chairmen of Quarter Sessions in Ireland are paid out of the Consolidated Fund, under the Act 20 & 21 Vict. c. 88, in which they were so styled. Previously to that Act they were styled "Assistant Barristers," and their salaries as now charged, to the amount of 32,050 *l.*, were paid under the Act 14 & 15 Vict. c. 57, passed in 1851. This charge included not only their salaries as Chairmen of Quarter Sessions, for their services in criminal as well as in civil cases, but also 100 *l.* each for their services as revising barristers under section 67 of the Irish Reform Act, 2 & 3 Will. 4, c. 88. It also included additional salaries to the assistant barristers, in lieu of the fees payable to them by the suitors upon certain civil bill proceedings, which fees ceased under the provisions of the Act; and in lieu of such fees, certain Stamp Duties were imposed by section 62, to meet the charges thus made upon the Consolidated Fund.

Assistant barristers were first appointed "to act as constant assistants to the justices at every session of the peace," in the counties of Ireland, Dublin excepted, in the year 1787, per Irish Act, 27 Geo. 3, c. 40, for the preservation of the peace in counties. Their salaries were paid out of the Consolidated Fund. These salaries were subsequently increased under the following Irish Acts, 31 Geo. 3, c. 29, 36 Geo. 3, c. 25, and 39 Geo. 3, c. 16. The amount paid in 1801 was 14,890 *l.*, British currency, and it appears in the expenditure accounts of Ireland, under the head of "Police Establishment," amongst the permanent grants. It was continued under this head in the Finance Accounts, until

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1831, when the heading was altered to that of " 32 Assistant Barristers of Counties,"the charge being 11,815 *l.*

The salaries of officers appointed to serve civil bill processes, amounting to 40 *l.* a year each, were authorised under sect. 17 of the Act 14 & 15 Vict. c. 57, passed in 1851, to be paid out of the gross revenues of excise. Under the Act 17 & 18 Vict. c. 94, this charge was transferred to the annual Votes. Certain fees were authorised under sect. 18 of the Act of 1851 to be paid to process servers in addition to their salaries, but no return is made of the total annual amount of these fees.

The net charge on the public revenue under this head, 1863–64, was as follows :—

	£.	£.
On the Consolidated Fund—Salaries of Chairmen of Quarter Sessions	32,050	
On Supply Votes—Process servers - - - - - - - -	8,300	
		40,350
Deduct stamp duty paid into the Exchequer in respect of proceedings in Civil Bill Courts in Ireland (Return, No. 160, of 1865) - - -		21,488
	£.	18,862

Maintenance of Prisoners.

In 1846, when proposing the abolition of the Corn Laws, the late Sir Robert Peel also proposed to relieve the counties of the whole charge of maintaining prisoners in Great Britain and Ireland under sentence for felony or misdemeanour, and to provide for it by an annual Vote of Parliament. One-half having been previously paid out of the public revenue, he estimated the relief to the counties at 64,000 *l.* a year.

In 1858, upon a complaint of the insufficiency of the amount granted for this charge in Ireland, the matter was inquired into by Mr. Macartney's committee. It was stated in evidence that the charge of maintaining prisoners in Ireland, sentenced to penal servitude or transportation only, was defrayed out of the Parliamentary grant, whilst the cost of maintaining prisoners convicted by a jury, exclusively of those sentenced to penal servitude or transportation, was defrayed wholly by the counties, amounting to one-third of the total cost of maintaining prisoners under sentence for felony or misdemeanour. It was also stated that no part of the cost of maintaining criminal lunatics in Ireland was paid out of the public revenue, whilst the charge in England was so paid. The committee recommended that the Government should fully carry out Sir R. Peel's proposition as regarded the maintenance of convicted prisoners, and that for the future every class of convicted prisoner or misdemeanant paid for by the Treasury in England should be paid for likewise by the Treasury in Ireland.

The Estimates for these services in 1864–65 and 1865–66 have been as follows :—

	Great Britain.		Ireland.	
	1864–65.	1865–66.	1864–65.	1865–66.
	£.	£.	£.	£.
Maintenance of prisoners in county gaols - - - - - - -	123,600	130,021	10,000	9,000
Maintenance of prisoners in reformatory institutions - - - - - -	81,000	83,000	13,123	10,413
Maintenance of prisoners in lunatic asylums - - - - - -	40,693	37,822	7,170	5,749
£.	245,293	250,843	30,293	25,162
Removal of convicts - - - - -	11,300	11,500	1,400	1,400

Police, Counties and Boroughs—Great Britain.

The county and district police in England and Wales were first established in 1839, under the Act 2 & 3 Vict. c. 93, and the expenses were charged on the county rates. This Act was amended in 1840 by the 3 & 4 Vict. c. 88, and the expenses were charged upon a police rate, to be levied with the county rate.

In the Municipal Corporations Act of 1835, 5 & 6 Will. 4, c. 76, provision was made for the appointment of constables in all boroughs of England and Wales subject to that Act.

Act. The Act 3 & 4 Vict. c. 88, authorised the consolidation of the county and borough police establishments.

In 1856 the Act 19 & 20 Vict. c. 69, contained further provisions relating to the county and borough police, and authorised the payment, out of monies to be provided by Parliament, of one-fourth of the charge of the pay and clothing of such county and borough police. The first annual grant for the service in Great Britain was made in 1857, and similar grants have been since continued.

The Estimates for 1864–65 and 1865–66 are as follows:—

	1864-65.	1865-66.
	£.	£.
England and Wales - - - - - -	208,000	211,050
Scotland - - - - - - - -	36,050	37,050
£.	244,050	248,100

Constabulary, Ireland.

The first organized police force throughout Ireland was authorised to be established under the Act 54 Geo. 3, c. 131, in districts proclaimed to be in a state of disturbance. The expenses were charged on such districts, provision being made to advance such sums as should be required from the Consolidated Fund, with precedence to presentments for their repayment.

In 1822, a new and more effective police was established under the Act 3 Geo. 4, c. 103. Advances from the Consolidated Fund were authorised to the amount of the expenses incurred, one-half of which was to be repaid by presentments in the several counties. The police superannuation allowances were charged wholly on the counties; but by a subsequent Act. 5 Geo. 4, c. 63, these superannuation allowances were placed upon the same footing as the other expenses. These Acts were consolidated and extended in 1836 by the 6 Will. 4, c. 13, and the salaries of the police magistrates and of some of their officers were charged wholly on the Consolidated Fund.

A further "Reserve Force" was established in 1839, under similar provisions, by the Act 2 & 3 Vict. c. 75.

In 1846, when proposing the abolition of the Corn Laws, and avowedly as a relief to the burdens on land, on the ground that Ireland more especially might suffer from the withdrawal of protection, Sir Robert Peel proposed also that the entire expense of the Irish constabulary should be paid out of the public treasury; and that, to prevent the possibility of all interference by local bodies, the constabulary force should be placed completely under the control of the executive Government. This arrangement had been strongly recommended by the Earl of Devon's commission in the previous year. Accordingly, under the Act 9 & 10 Vict. c. 97, passed on 28th August in the same year, the several provisions for repaying one-half of the expenses of the constabulary were repealed from the passing of the Act, except as to arrears then remaining unpaid, and the whole of the expenses were thenceforward charged on the Consolidated Fund. The several districts were, however, still made liable to one-half the expense of any additional force applied for by the magistrates, or of any reserve or increased force employed therein.

In 1854, the charge for the Irish constabulary was transferred from the Consolidated Fund to the Supply Grants voted annually by Parliament.

In 1858, the Revenue police in Ireland were abolished, and their duties transferred to the constabulary. The grant for the Revenue police in 1857–58 was 63,120*l.*, but their duties have been since executed by the constabulary at a far less expense.

The constabulary are also employed by the Government at the Curragh Camp and at Spike Island.

The total number of the constabulary employed in 1863–64 was		11,771
Reserve - - - - - - - - - - -		379
		12,150
Employed as Revenue police - - - - - -	400	
„ at the Curragh - - - - - -	43	
„ at Spike Island - - - - - -	5	
		448
		11,602

App. No. 8.

The net amount granted out of the public revenue for the Irish Constabulary in 1863–64, was as follows:—

		£.
Amount of grant 1863–64 - - - - - - - -		727,517
Deduct proportionate amount for 448 officers employed by the Government - - - - - - -	£. 26,825	
Deduct also estimated amount repayable to the Consolidated Fund by counties for augmentations, extra force, &c. (Estimates III. p. 49) - - - - -	13,730	
		40,555
	£.	686,962

The following are the amounts in the Estimates for the Irish Constabulary of the last and present years:—

	1864–65.	1865–66.
	£.	£.
Irish Constabulary - - - - - -	736,535	725,680

Metropolitan Police, London.

Previously to the Union, seven police offices had been established in the Metropolis, under the Act 32 Geo. 3, c. 53. This Act was continued by 36 Geo. 3, c. 75. The expenses of these offices, and of the several officers, were to be defrayed out of fees, penalties, &c.; the deficiency in any year being made payable out of the Consolidated Fund. Further provisions were made by Parliament in 1802, by 42 Geo. 3, c. 76, and subsequently by other Acts which increased the numbers and salaries of the police officers.

In 1829, the new police were established under the Act 10 Geo. 4, c. 44. Two justices were appointed, their salaries being payable out of the Consolidated Fund. Their duties were regulated by the Secretary of State, who was also empowered to regulate the pay of the police officers, and to sanction regulations made by the two justices. The expenses of the new police were to be defrayed by a rate in the metropolitan district, not exceeding 8 *d.* in the pound, according to the valuation for the county rate. This Act did not affect the Acts under which the metropolitan police offices were established.

In 1833, it was provided by the Act 3 & 4 Will. 4, c. 89, that when 3 *d.* in the pound should have been raised in any parish towards the police rate, for any half-year, and all previous arrears paid, there shall be issued from the Consolidated Fund such additional sum as shall be required, provided that no more than 60,000 *l.* was issued in any one year.

The provisions of these two last mentioned Acts were extended in 1839 by the 2 & 3 Vict. c. 47, and it was enacted that there should be also charged upon the Consolidated Fund, viz:—

1st. A yearly grant of 20,000 *l.* towards the increased charge of the Metropolitan Police.

2d. An additional yearly sum, not greater than 2 *d.* in the pound upon the additional rental assessed to the Metropolitan Police, in parishes added to the metropolitan district after the passing of the Act.

3d. The amount of certain superannuation allowances of the horse patrol and Thames police.

By a subsequent Act of the same Session, 2 & 3 Vict. c. 71, a further sum, not exceeding 50,000 *l.* in any one year, was authorised to be issued from the Consolidated Fund towards the salaries and other expenses of the metropolitan police courts, including superannuation allowances of the magistrates.

Under this Act also, the Receiver of the Metropolitan Police District was made Receiver of the Police Courts; and the fees payable in these courts, specified in a schedule to the Act, as well as all penalties and forfeitures, were directed to be paid over to the Receiver, and were made applicable towards the salaries and expenses of the police courts.

In 1854, all these charges upon the Consolidated Fund, both for the Metropolitan Police and the police courts, except salaries of the police magistrates, were discontinued by the Act 17 & 18 Vict. c. 94, and were thenceforth to be provided for by annual Votes.

App. No. 8.

Section 7 of the Act 17 & 18 Vict. c. 94 contains an important provision affecting the application not only of the fees and other casual receipts in the police courts of the metropolis, but also the application of similar receipts, payable to other public and local officers. Schedule (B) of the Act contains a list of salaries and payments theretofore charged under various Acts of Parliament upon, or payable out of, the Consolidated Fund and the several branches of the public revenues, but to be transferred under the Act to the annual votes of Parliament. Section 7 provides that when any of these charges and payments are by law payable out of any fees or other casual receipts, and are charged upon the Consolidated Fund only in the event and to the extent of any deficiency of such fees or other receipts, such fees or other casual receipts shall, from 1 April 1854, as the Treasury may direct, cease to be applicable to such charges or payments, and be from time to time paid into the Exchequer, to be carried to the Consolidated Fund, in which case the entire charge shall be provided for out of moneys to be provided by Parliament. This provision has since been carried out as regards the fees, &c., in the police courts of the Metropolis, under the Treasury Minute, dated 22 August 1854.

Return No. 32 of 1855.

In 1857, the Act 20 & 21 Vict. c. 64, recited the several above-mentioned Acts providing for the expenses of the Metropolitan Police, and that the amount authorised to be raised was insufficient. It was enacted, that in lieu of the sum of 60,000 *l.* a year, authorised to be issued by 3 & 4 Will. 4, c. 89, and the additional sum, equal to 2 *d.* in the pound upon the extended district, under 2 & 3 Vict. c. 47, an amount not exceeding 2 *d.* in the pound on the total rental assessed to the Metropolitan Police, should be contributed out of the public revenue. It was also provided that the police rate should be made upon the new and increased assessment for the poor's rate.

The Grants in Aid of the expenditure of the Metropolitan Police do not extend to the City of London Police, which are regulated by the Public Local and Personal Act, 2 & 3 Vict. c. xciv. One equal fourth part of the expenditure for the City of London Police is defrayed by a contribution from the Corporation, the remainder from a police rate, from fines and penalties imposed under the Act, and other casual receipts.

Return No. 469, of 1864, p. 5.

The net amount granted out of the Public Revenue for the Metropolitan Police and Police Courts, London, in 1863–4, was as follows:—

		£.
Annual Grants—Metropolitan Police - - - - -		143,519
Police Courts - - - -	£. 25,725	
Deduct fees, &c., paid into the Exchequer in the Year 1863 -	12,367	
		13,358
Out of the Consolidated Fund—Police Magistrates - -		27,900
	£.	184,777

The following sums appear in the Estimates for these services in 1864–65 and 1865–66:—

	1864-65.	1865-66.
	£.	£.
Salaries and Expenses of the Police Courts, London - - - - - - -	20,633	20,993
Towards the Expenses of the Metropolitan Police - - - - - - - -	156,736	155,166

The sum of 12,695 *l.* levied as fines, &c. by the police magistrates in the year 1864, was paid into the Exchequer.

In addition to these estimated grants for the Metropolitan Police, the following sums have been charged on the Army and Navy Grants for police services at military stations and naval yards:—

	1864-65.	1865-66.
	£.	£.
Army - - - - - -	10,299	11,611
Navy - - - - - -	40,489	39,692
Total - - - £.	50,788	51,303

App. No. 8.

Metropolitan Police, Dublin.

In 1808, under the Act 48 Geo. 3, c. 140, the old Dublin Watch was abolished and the Metropolitan Police of Dublin established. All fines and forfeitures at the police offices were made applicable to the expenses of the offices, and the old watch rate was made applicable to the expenses of the police. Annual sums for the Dublin police appear to have been granted by Parliament since 1819, the first grant to defray the expense of the police and watch establishment of Dublin being 26,600 *l.*, for the year ending 5th January 1820. The Act of 1808 was amended in 1824 by the 5 Geo. 4, c. 102, and in 1836 a new and more efficient Metropolitan Police was substituted, acting under the immediate authority of, and controlled by, the Irish Government. No further provision was made by this Act for the expenses of the new police beyond the application of the old rates. But in 1837 the Act 1 Vict. c. 25, authorised the levying a police rate of 8 *d.* in the pound for the maintenance of the police. The Act 2 & 3 Vict. c. 78, made further provisions for the Dublin police, and authorised the extension of the metropolitan district.

The Income and Expenditure of the Dublin Metropolitan Police for 1864–65 and 1865–66 is shown in the Estimates of the present Session, as follows:—

	1864-65.	1865-66.
Income:	£.	£.
Fees and Fines from Police Courts	3,500	4,000
Police Tax	24,500	25,500
Carriage Duty and Fees	5,000	5,000
Fees for Conductors' and Drivers' Licenses	200	200
Pawnbrokers' Licenses	4,800	4,800
Publicans' Certificates	500	500
Contingent Receipts, Old Stores, &c.	1,200	1,100
	39,700	41,100
Balance to be Voted by Parliament	50,500	49,000
£.	90,200	90,100
Expenditure:		
For Salaries and Expenses of Police Courts, Police Force, &c.	90,200	90,100

The Total Amounts issued out of the Public Revenues, both out of the Consolidated Fund and out of Annual Grants, together with the Amounts of Advances and Repayments on account of the Police in Great Britain and Ireland respectively, in each Financial Year from 5th January 1817, have been as follows:—

Out of the Public Revenues:

	Great Britain.		Ireland.			
	County and Borough Police.	Metropolitan Police, and Police Courts London.	Irish Constabulary.			Metropolitan Police, and Police Justices, Dublin.
	Issued.	Issued.	Issued.	Advances.	Repayments.	Issued.
	£.	£.	£	£.	£.	£.
In the Year 1817	- - -	29,310	- -	38,952	17,593	—
„ 1818	- - -	30,230	- -	35,390	21,312	—
„ 1819	- - -	29,322	- -	33,015	25,657	26,600
„ 1820	- - -	28,841	- -	78,000	9,761	26,000
„ 1821	- - -	51,110	- -	102,562	37,643	25,000
„ 1822	- - -	46,927	- -	136,906	39,943	28,000
„ 1823	- - -	62,236	- -	228,316	59,113	27,000
„ 1824	- - -	61,697	- -	238,786	89,012	27,000
„ 1825	- - -	64,714	- -	271,998	111,567	26,000
„ 1826	- - -	66,280	- -	274,728	98,514	25,000
„ 1827	- - -	68,893	- -	284,645	105,752	24,300
„ 1828	- - -	71,609	- -	260,957	119,804	24,300
„ 1829	- - -	69,551	- -	266,001	111,653	24,300
„ 1830	- - -	68,689	- -	269,372	117,585	23,000

	GREAT BRITAIN.		IRELAND.			
	County and Borough Police.	Metropolitan Police, and Police Courts, London.	Irish Constabulary.			Metropolitan Police, and Police Justices Dublin.
	Issued.	Issued.	Issued.	Advances.	Repayments.	Issued.
	£.	£.	£.	£.	£.	£.
In the Year 1831	-	67,418	-	310,843	114,417	20,853
„ 1832	-	67,151	-	352,331	125,814	8,312
„ 1833	-	55,668	-	366,040	158,144	22,625
„ 1834	-	113,989	-	369,624	168,367	7,000
„ 1835	-	109,648	-	350,268	172,274	17,000
„ 1836	-	116,076	58,976	332,492	183,273	17,000
„ 1837	-	106,169	230,799	150,930	125,638	18,307
„ 1838	-	108,976	265,558	175,159	158,650	38,848
„ 1839	-	109,109	232,232	153,712	169,902	29,162
„ 1840	-	129,160	248,469	157,395	175,804	39,917
„ 1841	-	129,524	262,816	184,621	173,677	36,615
„ 1842	-	134,010	258,533	171,141	174,509	34,030
„ 1843	-	126,110	261,267	191,929	178,417	32,300
„ 1844	-	122,081	272,575	181,943	172,876	46,000
„ 1845	-	137,194	277,831	175,710	181,553	30,500
„ 1846	-	133,171	331,550	147,529	178,712	36,600
„ 1847	-	132,426	461,524	25,400	184,054	45,000
„ 1848	-	134,771	531,387	27,078	37,348	36,000
„ 1849	-	134,055	548,305	41,582	33,956	36,600
„ 1850	-	134,575	544,828	40,147	40,276	74,600
„ 1851	-	133,897	520,559	39,567	35,689	40,000
„ 1852	-	138,858	537,071	37,991	44,942	34,100
„ 1853	-	127,851	537,001	30,710	35,247	32,100
Quarter to 5 April 1854	-	13,666	127,845	13,855	9,594	6,400
In the Year 1854–55	-	73,619	13,800	24,512	30,541	35,600
		*121,837	*650,000			
„ 1855–56	-	†100,891	417,803	20,542	25,240	36,100
„ 1856–57	-	131,310	622,587	21,024	20,673	39,600
„ 1857–58	120,000	150,263	624,594	18,561	18,448	38,100
„ 1858–59	195,980	168,600	661,000	- -	- -	38,100
„ 1859–60	218,475	170,273	692,007	- -	- -	44,978
„ 1860–61	243,475	172,452	669,692	- -	- -	47,980
„ 1861–62	224,575	174,429	710,084	- -	- -	47,051
„ 1862–63	188,475	174,804	809,468	- -	- -	44,600
„ 1863–64	228,050	184,777	688,917	- -	- -	49,500

* These sums form a portion of a Vote for "Legal Expenses previously charged on the Consolidated Fund." The separate amounts, as above, are shown only in the Estimates. The whole amount was expended in 1854–55 and 1855–56, but the exact sum under each head is not shown in the Finance Accounts.

† The amounts stated as issued for the Metropolitan Police and Police Courts, London, for 1855–6, and subsequent years, are the net sums, after deducting the following amounts of fees, fines, &c., paid into the Exchequer; viz.:—

	£.		£.		£.
1855–56 - -	16,908	1858–59 - -	11,270	1861–62 - -	10,812
1856–57 - -	11,838	1859–60 - -	10,902	1862–63 - -	11,724
1857–58 - -	11,291	1860–61 - -	10,808	1863–64 - -	12,367

Salaries of Auditors of Unions.

In 1846, upon the abolition of the Corn Laws, Sir Robert Peel proposed also that the salaries of auditors of poor-law unions, estimated at 15,000*l.* a year, should be borne by the public Treasury. It was shown, by the evidence given before Mr. Macartney's Committee, in 1858 (Question 163), that the official auditors of poor-law unions in Ireland were, from 1848, paid wholly out of the Parliamentary Grant. In the Estimates of the present Session the amounts for this service in 1865-66 are the same as in 1864-65, being as follows:—

Salaries of Auditors of Poor-law Unions:	£.
England - - - - - - - -	17,100
Ireland - - - - - - - -	2,400
£.	19,500

App. No. 8.

One-half of Salaries of Poor-law Medical Officers.

Another relief to the burdens on land proposed by Sir Robert Peel in 1846, upon the abolition of the Corn Laws, was, that one-half of the salaries of parish medical officers should be defrayed from the annual Votes of Parliament. He estimated the amount at 100,000*l.* for England and Wales, and 15,000*l.* for Scotland. He proposed no sum for Ireland, that country being under a separate law with respect to medical relief. It was recommended by the Committee of 1858 that as since 1852 the system of medical relief had been altered in Ireland, and the charge placed on the poor-rate, this rate should be relieved from one-half of the charge by an annual grant, and Ireland be thus placed on an equality with England and Scotland. It does not appear that this recommendation has been carried out, the medical officers of workhouses in Ireland being paid out of the poor-rates, according to the latest Return, on 4th June 1864 (No. 538, of 1864). The grants for this service, as stated in the Estimates for this Session, are as follows:—

	1864-65.	1865-66.
One-half of the Expense of the Salaries of Medical Officers:	£.	£.
In England - - - - -	98,000	99,000
In Scotland - - - - -	10,000	10,000
Total - - - £.	108,000	109,000

Salaries of Union Schoolmasters, &c.

In 1846 Sir Robert Peel also proposed to provide at the public charge the salaries of schoolmasters and schoolmistresses in unions, estimated at 30,000*l.* a-year. The annual charge for England and Wales has since been continued, the Estimate for 1865–66 being 34,000*l.* No charge appears in the Estimates for this service in Scotland and Ireland. It was stated in evidence before Mr. Macartney's Committee in 1858 that in Ireland these salaries were paid out of the poor-rate (Question 160). It would also appear from the Return 538, of Session 1864, that at the date of that Return (4th June 1864) the salaries of schoolmasters of workhouses in Ireland, 97 in number, were paid out of the poor-rates.

Exchequer,
3 May 1865.

H. W. Chisholm,
Chief Clerk.

Appendix, No. 9.

PAPER handed in by Mr. *Chisholm*. App. No. 9.

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App. No. 9.

The relative Ability of Great Britain and Ireland respectively to contribute to the Expenditure of the United Kingdom.

Lord Castlereagh. Debate Irish House of Commons, 5 February 1800.

At the period of the Union, in estimating the proportion that Ireland should contribute towards the Imperial expenditure, it was assumed by Lord Castlereagh that an income tax, as embracing all kinds of possession and expense, would be the best criterion by which to judge of the relative ability of Great Britain and Ireland to contribute their several proportions. As this criterion did not exist in Ireland, and it was considered unlikely that for some time her local circumstances could permit its operation, it was judged that the next best test of ability would be found in examining the relative commercial wealth of both countries, and the relative expenditure of both in articles of luxury; and if it should be found that these two proportions very nearly coincided with each other, that the best means of judging of the relative ability of the two countries had been discovered. The average real value of the imports and exports for the last three years ending 5 January 1799, was taken at 73,961,899 *l.* for Great Britain, and ending 25 March preceding, at 10,925,621 *l.* for Ireland, being a proportion of seven to one. The average annual amount of the following excised articles, viz., malt, beer, spirits, wine, tea, tobacco and sugar, consumed for the last three years, was proved to be in Great Britain, 46,891,655 *l.*, and Ireland, 5,954,856 *l.*, being in the proportion of $7\frac{7}{8}$ to one. It was assumed, therefore, that $7\frac{1}{2}$ to 1 was the just ratio of the ability of Great Britain, and of that of Ireland, and that upon this principle, Great Britain ought to contribute 15 parts and Ireland 2 to the general expenses of the empire. It was stated subsequently by Mr. Pitt that this was also the proportion, as nearly as could be ascertained, in which Ireland had contributed to the expenditure of the existing war.

These proportions of contributions were adopted in the seventh article of the Treaty of Union, and were charged upon the two countries till 1817, when they were discontinued, under the conditions contained in the Treaty of Union, providing, in the event of the respective debts of the two countries being at any future time in the proportion of their contributions, and also in the event of the respective circumstances of the two countries admitting of their contributing indiscriminately "by equal taxes imposed on the same articles in each country" to the future expenditure of the United Kingdom, that it should be competent for Parliament to declare the same, and to impose and apply such taxes accordingly, *subject only to such particular exemptions or abatements in Ireland, and in that part of Great Britain called Scotland, as circumstances might appear from time to time to demand*; and that after such declaration, it should be no longer necessary to regulate the respective contributions of the two countries according to any specific proportion.

A declaration to this effect was made by a resolution of the House of Commons on 20th May 1816, and the revenues of the two Kingdoms were consolidated and made applicable indiscriminately to the expenditure of the United Kingdom, from 5th January 1817, by the Act 56 Geo. 3, c. 98.

In point of fact, however, at no period from 1817 to the present time has Parliament imposed taxes on Ireland equal to those on Great Britain, although Scotland has been taxed equally with England and Wales since 1853, and has enjoyed few exemptions throughout the whole period from 1817, as compared with Ireland.

The excess of taxation in Great Britain as compared with Ireland since the Union, arising from taxes charged on Great Britain, but not on Ireland, is shown in detail, and for each year up to 1834, in the Return, No. 194, of Session 1834. At that period, the Customs Duties in the two countries had been assimilated with the exception of a small differential duty on timber, since discontinued. Of Excise Duties, then imposed on Great Britain only, half of the Soap Duty had been remitted in 1833, and the remaining half, to the amount of 1,170,000 *l.*, was remitted in 1853; the duties on starch (91,000 *l.*), and stone bottles (3,500 *l.*), were repealed in 1834; the duty on bricks, amounting to 456,000 *l.*, was repealed in 1850; in 1858, the duty on Irish spirits was assimilated to that on British spirits, at an estimated gain of 500,000 *l.* prospectively calculated, although 280,000 *l.* has since been taken as a more just estimate of the annual produce of the additional duty then imposed in Ireland; and the Hop Duty, to the estimated amount of 250,000 *l.*, besides 98,671 *l.* Customs Duty, was repealed in 1862. In 1842, the Stamp Duties in Ireland were assimilated to those in Great Britain at an estimated gain to the revenue of 121,745 *l.*

In

In 1863-4, Ireland was exempted from the following taxes, the gross receipts of which in Great Britain were as follows:— App. No. 9

	£.
Land* and Assessed Taxes	3,260,671
Railway Passengers	403,625
Hackney Carriages	98,121
Stage Carriages	128,475
Patent Medicines	49,849
Race Horses	7,288
	£. 3,948,029

Ireland was exempted from the Income Tax from 1842, when it was imposed in Great Britain, till 1853, when it was first imposed in Ireland. In 1842, whilst Sir R. Peel claimed for Parliament the entire right to apply the Income-tax to Ireland, he suggested that, as no machinery existed there for levying the tax, very nearly an equivalent amount might be raised by other means. He proposed to increase the spirit duty 1 *s.* a gallon, from 2 *s.* 8 *d.* to 3 *s.* 8 *d.*, equalising the duty with that in Scotland, and realising an additional income of 250,000 *l.* He proposed also to equalise the stamp duties in Ireland with those in Great Britain, at an estimated gain of 160,000 *l.* The final estimate of the produce of these additional taxes was, spirits, 240,000 *l.*; stamps, 121,745 *l.* together, 361,745 *l.* Hansard, 11 March 1842.

In 1853, when proposing that the Income-tax should be extended to Ireland, Mr. Gladstone observed that the additional 1 *s.* a gallon upon spirits was abandoned almost as soon as it was enacted. It was repealed in 1843. The additional stamp duties imposed upon Ireland in 1842 had also disappeared in the general reduction of stamp duties since made both in Great Britain and Ireland. There remained, therefore, no reasonable claim or plea for continuing to exempt Ireland from the Income-tax. He considered the extending the Income-tax to Ireland as one great step towards establishing an equalisation of taxation between the two countries, an advantage which he hardly knew how sufficiently to appreciate. He proposed at the same time, from a regard to the harmony of the relations between the two countries, and from the distress which had of late prevailed in Ireland, to remit the whole amount of 4,500,000 *l.* of debt due from Ireland on account of the Consolidated Annuities. Hansard, 18 April 1853.

From the first imposition, in 1853, of the Income-tax upon Ireland, she has been somewhat relieved from its burden, as compared with Great Britain, by the amount of Schedules A. and B., being assessed at the net value of lands, tenements, &c., exclusive of repairs, insurance, and other charges, under the Poor Law Valuation, this deduction not being made from the assessments in Great Britain. She is taxed also at one-third of the total assessment under Schedule B., instead of one-half as in England and Wales, but Scotland is taxed at the same lesser rate. This difference, which amounts to an excess of one-sixth of the assessment charged under Schedule B. in England and Wales, can hardly be considered as an exemption or abatement in Scotland and in Ireland, as the assessment charged is taken to represent the profits of the farmer in each division of the kingdom. The difference as regards Scotland was made in 1842. It was stated by Sir R. Peel, on 4 April 1842, that it would not be fair to tax the tenants of the two countries in precisely the same ratio, as local charges were generally borne by the landlord in Scotland, and in England by the tenant. He wished to put the Scottish farmer as nearly as might be on the same footing as the English farmer. The question was distinctly raised in the House of Commons, on 12 May 1853, when Mr. Vansittart moved that the assessment, under Schedule B. in England and Wales, be reduced to one-third, instead of one-half. It was opposed by Mr. Gladstone, on the grounds stated by Sir R. Peel, in 1842, and he also stated that the profits of the farmers in England fully represented one-half of their rents. The motion was defeated upon a division by 120 to 60. *See* Hansard.

The exemptions or abatements of taxation in Scotland, since the passing of the Consolidation Act in 1816, appear to be confined to the Malt Duty, which was 3 *s.* 1 *d.* per bushel, as compared with 3 *s.* 7½ *d.* in England, from 1816 to 1822, at which last period the rate was assimilated in the two countries, and to the duty on British spirits, which was not equalised in Great Britain till 1855. The differential rates on British spirits and the several alterations in England, Scotland, and Ireland respectively, for the whole period from 1801 up to their assimilation in 1858, are shown in the following table:—

AN ACCOUNT

* The only direct charges upon land in Ireland, which are payable into the Exchequer (with the exception of the Income-tax), are those arising from the rents of Crown lands. These charges do not appear to be of the nature of a tax imposed by Parliament, but to be rents anciently reserved in grants made by the Crown. They consist principally of quit-rents, being acreable rents reserved upon all the estates in Ireland forfeited by the Rebellion and regranted at the Restoration by the Crown. The King's Grant, dated 30 November 1660, is recited in the Act of Settlement (Irish Act, 14 & 15 Chas. 2, c. 2), and the quit-rents reserved are stated in s. 30 of the grant. They were not to be charged upon those estates upon which the rents formerly reserved exceeded them in amount. In these cases the former rents only were to be levied.—*See* Macartney's Account of Ireland, in 1773, p. 86; Howard on the Revenues of Ireland, 1786, vol. i., p. 43; Clarendon on the Revenues of Ireland, 1791, p. 11.

App. No. 9.

AN ACCOUNT of the RATES of DUTY on BRITISH SPIRITS in *England*, *Scotland*, and *Ireland* respectively, in 1801, and of the several alterations of Rates since made, up to the period of their assimilation in 1858.

SPIRITS.

	RATE PER GALLON.			
	ENGLAND.	SCOTLAND.		IRELAND.
		Lowlands.	Highlands.	
	s. d.	*s. d.*	*s. d.*	*s. d.*
1801	5 4½	1 –¼	1 1¼	2 4¼
1802	„	3 10½	3 4¼	2 10½
1803	8 –½	„	„	3 6¾
1804	„	5 10	5 –½	4 1
1807	„	5 9	4 11½	—
1810	„	„	„	2 6½
1811	10 3	8 –½	6 7½	—
1812	„	„	„	5 1¼
1813	„	„	„	5 7¼
		s. d.		
1815	„	9 4½		6 1½
1816	„			5 7¼
1817	„	6 2		—
1819	11 8½			—
1823	„	2 5		2 5
1826	7 –	2 10		2 10
1830	7 6	3 4		3 4
1834	„			2 4
1840	7 10	3 8		2 8
1842	„			3 8
1843	„			2 8
1853	„	4 8		3 4
1854	„	6 –		4 –
1855	8 –	8 –		6 2
1858	„			8 –

The

App. No. 9.

The relative ability of Great Britain and Ireland respectively, to contribute to the Imperial expenditure, having been assumed, in 1801, to be in the proportion of 15 to 2, or, to take the proportion per cent., as more convenient for comparison, of 88·235 to 11·765 per cent., and the relative contributions of the two countries to the joint expenditure having been settled in these proportions, it may be interesting to compare with these ratios the proportions of actual contributions of revenue by the two countries in the several years from 1801 to 1816 inclusive, both of revenue from taxation, and of total revenue applicable to expenditure. These will be found in the following accounts:

AN ACCOUNT of the TOTAL NET PRODUCE of CUSTOMS, EXCISE, STAMPS, TAXES (including WAR TAXES) and POST OFFICE MONEY paid into the Exchequer of *Great Britain* and *Ireland* respectively, in each Year from 1800 to 1816 inclusive, as shown at pp. 12 and 13 of the Return, No. 110, of Session 1865; showing the Increase per Cent. or Decrease (distinguished by — *and in Italic Figures*), in each Year from 1801 to 1816, and the Aggregate Increase per Cent. as Compared with 1800, the Year before the Union.

GREAT BRITAIN.				IRELAND.			
YEAR.	Amount.	Increase per Cent. over 1800.	Proportion per Cent. of Net Produce of both Countries.	YEAR.	Amount.	Increase *or Decrease* per Cent. over 1800.	Proportion per Cent. of Net Produce of both Countries.
	£.				£.		
1800	30,549,214	- -	93·	1800	2,314,270	- -	7·
1801	30,802,157	·83	93·4	1801	2,172,490	*— 6·13*	6·6
1802	32,718,138	7·1	91·6	1802	3,007,400	30·	8·4
1803	34,933,238	14·3	93·2	1803	2,537,051	9·62	6·8
1804	42,117,349	37·87	93·4	1804	2,977,689	28·6	6·6
1805	46,314,837	51·6	93·8	1805	3,071,852	32·7	6·2
1806	49,967,445	63·55	93·4	1806	3,518,458	52·03	6·6
1807	54,547,418	78·55	93·1	1807	4,044,317	74·76	6·9
1808	57,105,788	86·93	93·17	1808	4,187,173	80·93	6·83
1809	58,996,337	93·12	95·8	1809	3,919,225	69·35	6·2
1810	62,582,807	104·85	95·	1810	3,296,478	42·4	5·
1811	60,524,577	98·12	94·	1811	3,819,571	65·05	6·
1812	58,686,220	92·1	93·	1812	4,489,944	94·01	7·
1813	62,552,965	104·76	93·1	1813	4,633,828	100·2	6·9
1814	65,052,053	112·94	92·77	1814	5,063,292	118·8	7·23
1815	66,092,838	116·34	92·6	1815	5,277,832	128·06	7·4
1816	57,148,896	87·07	93·16	1816	4,195,440	81·3	6·84
Total of the 16 years - -	840,143,063	1,150·	- -	- -	60,212,040	1,001·	—
Average Annual Amount -	52,508,941	71·8	93·31	- -	3,763,252	62·6	6·69
Average Annual Amount less War Taxes - - -	35,962,815	- -	90·5	- -	3,763,252	—	9·5

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An ACCOUNT of the TOTAL REVENUE of *Great Britain* and *Ireland* respectively in each Year, from 1801 to 1816 inclusive, applicable to Public Expenditure, including the Expenses of Management of Revenue; and of the Total Actual Expenditure in each Year, exclusive of Debt paid off beyond the Sinking Fund; showing the proportion per cent. of such Revenue to such Expenditure in each Year and for the whole period.

Note.—The Expenditure includes the joint expenditure actually defrayed in each year, including the payments from Ireland to Great Britain on account of the Balance due on the Joint Expenditure Account; and the Total Revenue of Great Britain includes the Receipts from Ireland on account of such Balance; as shown at pp. 378 and 379 of the Appendix to the Report of the Committee on the Taxation of Ireland, Session 1864.

GREAT BRITAIN.					IRELAND.				
Year.	Total Revenue applicable to Public Expenditure.	Total Actual Expenditure.	Proportion Per Cent. of Revenue to Expenditure.	Proportion Per Cent. of Total Revenue of both Countries.	Year.	Total Revenue applicable to Public Expenditure.	Total Actual Expenditure.	Proportion Per Cent. of Revenue to Expenditure.	Proportion Per Cent. of Total Revenue of both Countries.
	£.	£.				£.	£.		
1801	35,262,508	64,277,348	55·	91·8	1801	3,186,929	7,628,066	41·8	8·2
1802	36,744,967	55,351,099	66·4	90·1	1802	4,022,248	6,595,240	60·9	9·9
1803	33,132,768	51,812,173	73·6	91·9	1803	3,373,489	6,577,761	51·2	8·1
1804	45,925,296	62,611,005	73·3	92 5	1804	3,733,950	7,845,120	47·6	7·5
1805	50,228,236	71,254,371	70·5	92·8	1805	3,901,917	7,707,244	50·6	7·2
1806	53,703,128	71,634,885	75·	92·3	1806	4,502,789	8,273,627	54·4	7·7
1807	58,972.487	72,720,761	81·8	92·2	1807	4,990,655	8,307,943	60·	7·8
1808	61,583,333	79,966,072	77·	92·27	1808	5,162,016	8,940,373	57·7	7·73
1809	63,489,738	82,620,629	76·8	92·7	1809	5,081,304	9,357,076	54 3	7·3
1810	68,573,702	85,721,364	80·	93·6	1810	4,687,491	10,426,028	44·9	6·4
1811	66,375,825	91,703,778	72·3	93·	1811	5,017,734	11.306,300	44·3	7·
1812	64 270,276	99,303,681	64·68	92·	1812	5,696,841	11,455,449	49·3	8·
1813	71,614,495	114,150,713	62·7	92·4	1813	5,891,588	12,845,452	46·	7·6
1814	72 577,562	117,612,837	61·7	92·	1814	6,432.184	13,277,268	48·4	8·
1815	76,869,272	102,456,858	75·	92·1	1815	6,598,773	17,057,036	38·6	7·9
1816	63,335,535	78,363,023	80·82	92·	1816	5,564,285	12.137,821	45·8	8·
TOTAL of the 16 years	927,659,128	1,301,620,597	1,146·6	—	–	77,844,193	159,737,804	796·1	—
Annual Average Amount	57,978,695	81,351,287	71·6	92·25	–	4,865,262	9,983,613	49·	7·75

It will be seen from the first of these two accounts, that although the net revenue of Ireland derived from taxation upon an average of the last five years ending in 1816, was more than doubled as compared with the net revenue in 1800, yet the relative proportion per cent. which this net revenue of Ireland bore to that of Great Britain in 1800, of 7 to 93, was barely exceeded throughout these five years, whilst Ireland's proportion diminished rather than increased throughout the whole period.

In reference to this account, taken from the Return, No. 110, of Session 1865, attention may be particularly directed to the remarkable difference in Great Britain and Ireland respectively of the total increase of the actual net produce of taxes subjected to alterations of rates from 1801 to 1816, as compared with the total net estimated sum from increased taxation. This is shown at page 15 of that Return. In Great Britain, the estimated gain for the whole period was 286,042,894 *l.*; the actual increase was 351,295,633 *l.*, being 23 per cent. more than the estimate. In Ireland, the estimated gain was 53,937,999 *l.*; the actual increase was no more than 23,183,726 *l.*, being 57 per cent. less than the estimate. If the actual increase in each country had been equal to the estimated gain, the proportions of the total net revenue of each country for the whole period, instead of being 93·28 to 6·72 per cent., would have been 90·39 to 9·61.

The second of the two accounts shows a somewhat more favourable, but not a materially different result for Ireland, as respects the total revenue applicable to expenditure. It shows also the proportion per cent. which such total revenue of each country, in each year, bore to the actual expenditure, the general result for the whole period being that whilst Great Britain raised 71 per cent. of her expenditure out of revenue, Ireland raised no more than 49 per cent.

Another remarkable result is shown from this account, that in the year 1815, when Ireland's total revenue was raised to the highest amount, and when the increase of her net produce from taxation, as compared with 1800, was no less than 128 per cent., being a greater ratio of increase than Great Britain produced in any year, yet the proportion per cent. of this increased revenue, as compared with her expenditure, was actually less than in any other year of the series, being no more than 38·6 per cent. It is true that Ireland's expenditure in 1815 was much increased by the large payment which she made in that year to Great Britain on account of the balance due for her proportion of the joint expenditure. But the fact that, notwithstanding her large increase of revenue from year to year, she was enabled to provide by taxation for so small a proportion of her increased expenditure,

expenditure, in comparison with Great Britain, tends to the inference that her relative ability did not increase in the same proportion with that of Great Britain, to contribute to the largely increased expenditure, and that although her proportion of 2-17ths may have been fairly estimated in 1801, it was too high a proportion in the subsequent years.

A similar inference was drawn in the year 1816, by the late Mr. John Smith, a financial officer of great experience, from a consideration of the amounts of the joint expenditure defrayed by each country from 1801 to 1815. He came at that time to the conclusion that the settlement of 15-17ths for Great Britain and 2-17ths for Ireland, was not then a fair proportion to the relative ability of each country, and that taking the whole expenditure from the Union, it was clear that Ireland had contributed to the expense of the Empire much more than was intended by those who framed the proportions at the time of the Union (*see* page 421, Appendix to Report 1864).

An important confirmation of the truth of this inference may be found in the fact that Ireland was unable to contribute from her own resources more than a very small proportion, in comparison with Great Britain, of the amount raised by loan during the period from 1801 to 1816, not only of the total amount raised for both countries, but of the separate amount raised for the service of Ireland.*

The amounts actually raised by loan during this period, and the proportion per cent. for each country, were as follows:—

1801–1816.	Amount Raised.		Proportion per Cent.		
	Great Britain.	Ireland.	Great Britain.	Ireland.	
	£.	£.	£.	£.	
Amount actually raised by Loan *for the service of each country* - -	285,217,055	77,604,883	78·6	21·4	Appendix to Report, 1864, pp. 380, 381.
Amount actually raised by Loan *in each country for the service of the United Kingdom* - - -	345,972,055	15,934,954	95·6	4·4	Appendix to Report, 1864, p. 400.
Amount actually raised by Loan *in each country for the service of Ireland* - - - - -	60,750,000	15,934,954	79·2	20·8	

These sums represent only the amounts raised by loan and by creation of Funded Debt during this period. The total net amounts raised by creation of both Funded and Unfunded Debt, after deducting sums applied to pay off such debt, exclusive of Sinking Fund, were as follows:—

1801–1816.	Amount Raised.		Proportion per Cent.		
	Great Britain.	Ireland.	Great Britain.	Ireland.	
	£.	£.	£.	£.	
Net Amount actually raised by creation of Funded and Unfunded Debt for the service of each country - - - -	364,410,964	80,468,055	81·9	18·1	Appendix to Report 1864, p. 382.
Net Amount actually raised by creation of Funded and Unfunded Debt in each country for the service of the United Kingdom - - - - -	425,150,964	19,718,055	95·5	4·5	
Net Amount actually raised by creation of Funded and Unfunded Debt in each country for the service of Ireland - -	60,750,000	19,718,055	75·5	24·5	

There is evidence to prove that it was the inability of Ireland to raise money from her own resources, which alone compelled her thus to fall back upon the more abundant and increasing wealth of Great Britain.

On 14th June 1804, the following statement was made in the House of Commons by Mr. Corry, the Irish Chancellor of the Exchequer, in reply to an objection by Mr. Leslie Foster, against the mode of borrowing money in England for Ireland:—

"He asserted that the loans could not have been raised in Ireland, and gave several reasons to support his assertion. He perfectly agreed with Mr. Foster that the raising loans in Great Britain did, by causing the interests to be remitted to this country, materially injure Ireland. He desired it to be understood that so long as loans were to be raised,

* In the protest of the Irish Peers against the Union, on 13th June 1800, in which they stated their opinion that the proportion of two-seventeenths was far beyond what the resources of Ireland would enable her to discharge, they added, "The facility with which large sums of money have lately been raised in Great Britain, compared with the unsuccessful attempt to raise so small a sum in this kingdom as 1,500,000*l.*, would have afforded Mr. Pitt the strongest proof of the opulence of the one and the poverty of the other."

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raised, the stocks in Ireland should be so, from time to time, increased as to meet the increasing capital of the country destined for the stock market; beyond that amount, the only market for Irish stock was that of Great Britain, to which, of course, the surplus stock found its way. In this he was warranted by the transaction of the Irish Loan in 1800, of which 700,000 *l.* only was sent into the Irish market, whilst the remaining sum of 1,400,000 *l.* was brought to the British market, the contractor binding himself to pay the interest in this country, which was paid to him by the Government of Ireland."

Far stronger evidence will be found in the circumstances of the loans raised in 1815, when the largest amounts were raised of any year during the war. The loans authorised were, first, a separate loan for Great Britain of 7,000,000 *l.*; and secondly, a loan of 36,000,000 *l.*, of which 9,000,000 *l.* was for the service of Ireland. The total amount for the United Kingdom was 43,000,000 *l.*, of which 34,000,000 *l.* was for Great Britain and 9,000,000 *l.* for Ireland. But the whole amount of 43,000,000 *l.* was raised in Great Britain, and of necessity so raised. The Irish Chancellor of the Exchequer, Mr. William Fitzgerald, afterwards Lord Fitzgerald, was most anxious to raise even a portion of the 9,000,000 *l.* required for Ireland in that country. It was found that the utmost amount which there was any hope of raising was 1,000,000 *l.*, and even that was doubtful. The whole amount was therefore raised in Great Britain.

The evidence of this fact will be seen from the following extracts of letters, copied by me last year in Ireland, from the private correspondence of the late Lord Fitzgerald, through the courtesy of an Irish gentleman, who has in his possession all the private correspondence of the last Irish Chancellor of the Exchequer, and who submitted it for my perusal.

Mr. *William Gregory*, Under Secretary for Ireland, to Mr. *William Fitzgerald*, Irish Chancellor of the Exchequer, dated Dublin Castle, 13 May 1815.

"I HAD this day a meeting with the Governor and Deputy Governor of the Bank, Mr. Goff and Mr. White. The two first were of opinion that a loan not exceeding 1,000,000 *l.* might be raised this year, notwithstanding the heavy load of loan, which still remains on hand from last year, that the not raising any loan in Ireland would be degrading to the country, and, I suppose, show the nakedness of the land.

"The two others were against any loan for this year; that the quantity of the last loan was very oppressive to the holders; that if no more was brought into the market, they would be enabled in the course of the year to get rid of what they had, and in the ensuing year, a loan might be raised to considerable advantage. Mr. Goff added, that the English Funds being at this time 10 per cent. lower than the Irish ones, and exchange being also very low, the monied man here could gain by remitting his money to England, and could afford to pay the income tax It was the decided opinion of the two last, that no loan could be raised but upon disadvantageous terms, and as the two first thought 1,000,000 *l.* was the utmost which could be raised, Goff considered it would be of little use to the State, and would show more the poverty of attempting so small a loan than raising none. The Governor of the Bank said he had spoken to Mr. Crossthwaite, who agreed with him that 1,000,000 *l.* could be raised."

Mr. *Robert Peel* (the late Sir *Robert Peel*), Chief Secretary, to Mr. *William Fitzgerald*, Chancellor of the Exchequer for Ireland; dated 18 May 1815.

"I HAVE no hesitation that I think all the argument in the enclosed is against any loan in Ireland, the alternative being a loan of 1,000,000 *l.* (and that possibly an overwhelming one) and none at all.

"As for the degradation of Ireland, of not raising any loan within herself, her character for financial prosperity does not entitle her to be very scrupulous on that head. I think with Goff too, that her solitary million would be an exposure of her poverty, and not a proof of her wealth. It would show that you would raise more if you could.

"If you raise no loan this year, you may cut a respectable figure next year, and perhaps get 1,400,000 *l.* or 1,500,000 *l.*"

With this evidence, it appears to be impossible to reconcile the assumed fact of the ability of Ireland to contribute 2-17ths or 11·765 per cent. of the Imperial expenditure, with the ascertained fact of her inability to contribute from her own resources more than 4 5 per cent. of the money required to be raised by creation of debt to provide for the largely increased war expenditure, during the 16 years from 1801 to 1816.

The proportional contribution made by Ireland towards the expenditure of the United Kingdom, was not however provided from taxation. As has been shown, Ireland actually paid during these 16 years 159,737,804 *l.*, whilst Great Britain paid 1,301,620,597 *l.*, being in the proportions of 89 07 for Great Britain, and 10·93 for Ireland. To meet this amount of Ireland's expenditure, rather more than half of the whole amount required was provided by adding to her debt. Although her debt and her liabilities for its annual charge were thus increased, until they amounted at the end of the 16 years to a greater proportion than 2 to 15 as compared with those of Great Britain, yet it should not be forgotten that her debt

debt was then consolidated with the debt of Great Britain; and from that period to the present she has not only never in any one year contributed by taxation in the proportion of 2-17ths towards the Imperial expenditure, but has never even approached this proportion till within a recent period. She has never really had the burden imposed upon her of providing from her own resources, 2-17ths of the amount required for the Imperial expenditure.

If, however, any value be attached to the fact of the proportions of the actual contributions to the Imperial expenditure from revenue by taxation during the 16 years, as affording any data for ascertaining the relative ability of each country to contribute to such expenditure, it ought also to be shown how large a portion of the revenue of Great Britain was derived from taxation from which Ireland was exempt, and what the estimated proportions would have been, had equal taxes been laid on the two countries. This estimate may be most fairly made upon a comparison of Ireland's actual revenue with such portion of the revenue of Great Britain as was derived from taxation imposed equally upon both countries, so far as it is possible to estimate the amount, after deducting from the revenue of Great Britain the gross receipt from taxation not imposed upon Ireland. It must be admitted that this mode of calculation is open to the objection that if this additional taxation had not been imposed upon Great Britain, the result would have been that her revenue from the remaining taxation would have been largely increased by the increased consumption of articles subject to duties, and to this extent the proportion of Great Britain thus estimated may appear too low, although it is impossible to estimate what allowance should be made on this account.

The gross receipts in Great Britain from Excise and Taxes not levied in Ireland, in each year from 1801 to 1834, are shown in detail in the Return, No. 194, of Session 1834. The Excise duty on British salt should be deducted, as a similar Customs rate was imposed in Ireland. The total amounts for the whole period, but not for each year, of the excess of rates of Excise, stamps, and assessed taxes, levied in Great Britain beyond the rates in Ireland are also shown, and under each head of Excise; in the following estimate of these amounts, from 1801 to 1816, and 1817 to 1822, the total of the annual average amounts of this excess of rates is taken.

The amount of Customs duties is shown in a different form in the Return of 1834, being the estimated revenue *in Ireland*, in each year, from rates equalised with those in Great Britain, and levied upon the quantities actually entered for consumption. As the effect of such additional taxation, if imposed upon Ireland, must necessarily have been to diminish to a great extent the consumption of articles subject to duties, and consequently the receipts of revenue, the estimated proportions of revenue from equal taxes cannot properly be calculated from these data. An estimate therefore has been made by the Customs Department, of the gross receipts in Great Britain from articles not subject to duties in Ireland, so far as it can now be ascertained, and similar to that furnished by the Excise Department in 1834, in order to complete the necessary data now required.

The following account shows the total gross receipts of ordinary revenue for Great Britain and Ireland respectively, and their relative proportion per cent., for the whole period of the 16 years from 1801 to 1816 inclusive; together with the amounts and proportions per cent. of the estimated revenue from equal taxation:—

	Great Britain		Ireland.	
	Amount.	Proportion per Cent.	Amount.	Proportion per Cent.
	£.		£.	
Gross receipts of ordinary revenue in the 16 years 1801 to 1816. (From Returns No. 273 of Session 1841 and No. 356 of 1863) - - - - - - - -	888,713,107	92·15	75,746,833	7·85
Deduct from Great Britain, estimated revenue from taxation not imposed on Ireland (*see* No. 194/1834); viz.,				
£.				
Customs - - - 158,636,295				
Excise - - - 150,296,172				
Stamps - - - 42,006,293				
Taxes - - - 231,428,756				
	582,367,516			
Estimated Revenue from equal Taxation - £.	306,345,591	80·18	75,746,833	19·82

But it would not be just to charge Ireland with equal taxation during this period, during the earlier years of which the proportion of her debt was in a far less ratio than her contributions to the joint expenditure. It may be more to the purpose to make a similar comparison of the proportions of revenue from taxation contributed by each

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country in the years subsequent to 1816, when Ireland was made liable to equal taxation with Great Britain under the terms of the Treaty of Union.

This is shown in the following Account of Revenue from Taxation, viz.:—

I. In the five years from 1817 to 1821 inclusive;
II. In the year 1845 } Including also the amounts of proportionate local taxa-
III. In the year 1863–4 } tion, so far as they can be ascertained.

I.—An Account of the Gross Receipt of Ordinary Revenue from Taxation in *Great Britain* and *Ireland* respectively in each year, from 1817 to 1821 inclusive, together with the Total Amount for each Country in the whole period, and showing the proportion per Cent.

Year.	Great Britain.		Ireland.	
	Amount (per No. 273 of 1841).	Proportion per Cent.	Amount (per No. 273 of 1841).	Proportion per Cent.
	£.		£.	
1817	51,614,484	90·71	5,285,654	9·29
1818	52,964,366	90·76	5,392,774	9·24
1819	51,829,694	91·1	5,064,730	8·9
1820	54,553,672	92·24	4,591,826	7·76
1821	56,607,179	91·82	5,039,719	8·18
Total of the Five years	267,569,395	91·3	25,374,703	8·7
Deduct from Great Britain estimated Revenue from Taxation not imposed on Ireland (*see* No. 194, 1834), viz.:—				
Customs £. 14,347,204				
Excise 44,096,425				
Stamps 13,126,966				
Taxes 29,826,855				
	101,397,450	—	—	—
Estimated Gross Revenue from equal Taxation in the Five years 1817–1821 £.	166,171,945	86·75	25,374,703	13·25

II.—A Similar Account for the Year 1845.

Year.	Great Britain.		Ireland.	
	Amount.	Proportion per Cent.	Amount.	Proportion per Cent.
	£.		£.	
Year ending 5 January 1846	51,324,657	91·6	4,708,291	8·4
Deduct from Great Britain Revenue from Taxation not imposed on Ireland (*see* Finance Accounts), viz.:				
Income Tax £. 5,182,649				
Land and Assessed Taxes 4,441,746				
Hackney carriages 65,933				
Stage carriages 431,371				
Spirits, excess over rates in Ireland * 2,350,304				
Patent Medicines 28,942				
Soap 963,507				
Bricks 561,867				
Hops 257,447				
Post Horses 169,853				
	14,453,619	—	—	—
Estimated Gross Revenue from equal Taxation	36,871,038	88·68	4,708,291	11·32
Add—Proportionate Local Taxation (Appendix 7, page 120)	11,190,820	88·24	1,490,631	11·76
Total £.	48,061,858	88·57	6,198,922	11·43

* Gross Receipts:

England	£. 2,859,046 at 7/10 =	£. 973,292 at 2/8	
Scotland	1,703,349 at 3/8 =	1,238,799 at 2/8	
	£. 4,562,395	£. 2,350,304 Excess	

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III.—A Similar Account for the Year 1863–4.

Year.	Great Britain.		Ireland.	
	Amount.	Proportion per Cent.	Amount.	Proportion per Cent.
	£.		£.	
Year ending 31 March 1864 - - -	61,637,634	90·49	6,477,666	9·51
Deduct from Great Britain Revenue from Taxation not imposed on Ireland (*see* Finance Accounts), viz :				
Land and Assessed Taxes £. 3,260,671				
Railway Passengers - 403,625				
Hackney Carriages - - 98,121				
Stage Carriages - - 128,475				
Patent Medicines - - 49,849				
Race Horses - - - 7,288				
	3,948,029	—	—	—
Gross Revenue from equal Taxation - -	57,689,605	89·9	6,477,666	10·1
Add—Proportionate Local Taxation (Appendix 7, page 120) - - - - -	13,765,853	88·34	1,816,275	11·66
Total - - £.	71,418,418	89·6	8,293,941	10·4

Additions and Remissions of Taxation, 1816–1864.

The proportions of the Amounts of Taxes remitted and imposed in Great Britain and Ireland respectively, from 1816 to 1864, will be seen in the following Account:—

An Abstract Account of the Amount of Taxes remitted and Taxes imposed in *Great Britain and Ireland* respectively, distinguishing between the Total Amount, and the Amount Less Income Tax, from 1816 to 1841, 1842 to 1852, and 1853 to 1864, and for the whole period from 1816 to 1864, together with the relative proportions per Cent. for each Country, and the relative proportion of *Great Britain* to *Ireland*'s ratio of Contributions under the Act of Union; showing also, the Balance of the Amount of Taxes remitted or imposed for the whole period in each Country, and the similar proportions.

(From Return No. 110, of Session 1865.)

Taxes Remitted.

	Total Remitted.						Total, less Income Tax.					
	Great Britain.			Ireland.			Great Britain.			Ireland.		
	Amount.	Proportion per Cent.	Proportion to 2.	Amount.	Proportion per Cent.	Proportion of 2.	Amount.	Proportion per Cent	Proportion to 2.	Amount.	Proportion per Cent.	Proportion of 2.
	£.			£.			£.			£.		
1816–1841 -	28,580,548	91·8	22·4	2,549,159	8·2	2	28,580,548	91·8	22·4	2,549,159	8·2	2
1842–1852 -	12,405,610	94·45	34·	729,051	5·55	2	12,405,610	94·45	34·	729,051	5·55	2
1853–1864 -	31,493,692	93·44	28·6	2,210,769	6·56	2	16,442,692	94·3	33·	996,767	5·7	2
1816–1864 -	72,479,850	93·	26·5	5,488,979	7·	2	57,428,850	93·1	27·4	4,274,977	6·9	2

(From Return 286, of Session 1865.)

Taxes Imposed.

1816–1841 -	6,671,914	86·6	13·	1,039,010	13·4	2	6,671,914	86·6	13·	1,039,010	13·4	2
1842–1852 -	5,887,589	93·8	30·	390,774	6·2	2	787,589	66·8	4·	390,774	33·2	2
1853–1864 -	23,030,336*	86·7	13·	3,551,239	13·3	2	9,743,336	82·5	9·6	2,074,239	17·3	2
1816–1864 -	35,589,839*	87·76	14·3	4,981,023	12·24	2	17,202,839	83·1	9·9	3,504,023	16·9	2

* After deducting 140,000 *l.*, the net amount of duty on game certificates, *transferred to Excise from Taxes*, in 1860. *See* Appendix 16, Account III, page 198.

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Balance of Taxes Remitted or Imposed.

1816 to 1864.

TOTAL.

	Remitted.	Imposed.	Balance Remitted.		
	Amount.	Amount.	Amount.	Proportion Per Cent.	Proportion of Great Britain to Ireland's Proportion of Contribution under the Act of Union.
	£.	£.	£.		
Great Britain - -	72,479,850	35,589,839	36,610,011	98·63	144
Ireland - - -	5,488,979	4,981,023	507,956	1·37	2
£.	77,968,829	40,570,862	37,117,967	100·	—

Total, Less Income Tax.

Great Britain - -	57,428,850	17,202,839	40,226,011	98·1	103·3
Ireland - - -	4,274,977	3,504,023	770,954	1·9	2

With reference to the very large proportion of the amount of balance of taxes remitted in Great Britain, being 36,610,011 *l.*, as compared with 507,956 *l.* in Ireland, it should be observed, that it arises partly from the remission of heavy taxation to which Great Britain was subject in 1816, and from which Ireland was exempt, and partly from the largely-increased produce of the remitted taxes in Great Britain, as compared with Ireland. Excluding the arrears of income tax, as well as the assessed taxes, Great Britain contributed in 1816 nearly 17,000,000 *l.* from taxation not imposed upon Ireland; and the remissions of assessed taxes in Great Britain since 1823, when the assessed taxes ceased in Ireland, have amounted to no less a total sum than 4,145,831 *l.*

Direct and Indirect Taxation.

Amongst the statistical data which may serve to show the relative ability of the two countries, it may be important to state the proportions of the amounts of direct and indirect taxation contributed by each country.

For this purpose it becomes necessary to decide upon each head of revenue from taxation, whether it is to be considered the produce of a direct or indirect tax.

Taxation and Funding, p. 1. Mr. M'Culloch's definition of direct and indirect taxation is as follows: "A tax is said to be *direct* when it is taken directly from property or income; and *indirect* when it is taken from them by making individuals pay for liberty to use certain articles, or to exercise certain privileges."

Principles of Political Economy, vol. 2, p. 370. "A direct tax," as defined by Mr. J. S. Mill, "is one which is demanded from the very persons who, it is intended or desired, should pay it. Indirect taxes are those which are demanded from one person in the expectation and intention that he should indemnify himself at the expense of another, such as the Excise or Customs. The producer or importer of a commodity is called upon to pay a tax on it, not with the intention to levy a peculiar contribution upon him, but to tax through him the consumers of the commodity, from whom it is supposed that he will recover the amount by means of an advance of price."

The customs and excise may be stated as indirect taxes, the only exception being the duty of game certificates, transferred from assessed taxes to excise in 1860. This duty in Ireland had been previously collected by the Excise Department. In 1863–4, the gross receipt in Great Britain was 126,052 *l.*; in Ireland, 9,410 *l.* The game duty is not altogether a direct tax, as it includes certificates for the sale of game, the duty for which, as well as for certificates to kill game intended for sale, may be classed as indirect taxation.

Besides direct taxes on income and property, and indirect taxes of customs and excise, on consumption, the remaining taxation comprises a variety of miscellaneous imposts not strictly included in either class.

p. 412. The stamp duties are generally taxes on contracts, including the transfer of property, and chiefly on purchases and sales. "Taxes on the sale of consumable commodities are simply taxes on those commodities." The stamp duties are thus partly direct and partly indirect taxes. It will hardly be denied that the probate, and the legacy and succession duties belong to the class of direct taxation. As to the other heads of stamp duties, all, including the duties on fire insurance, appear to have reference, more or less, to business transactions, to which extent they may be classed as indirect taxation.

p. 415. "The Post Office duties, under the uniform penny postage, can hardly be considered as taxation, but rather as the profits of a business." For the present purpose this source of revenue may fairly be excluded from the comparison.

p. 370. The assessed taxes are considered by Mr. J. S. Mill as direct taxes on expenditure, although he deems the house tax, if levied on the builder or owner, to be an indirect tax. The duty on horses, so far as they are used for purposes of business, and on horse dealers, may be ranked as indirect taxation. But the assessed taxes appear on the whole to belong to the class of direct taxation. The land tax is without doubt a direct tax. As, however, both the land and assessed taxes are included in that portion of the taxation of Great Britain which is not imposed upon Ireland, they are for the present purpose excluded from the comparative amounts of taxation.

As regards local taxation, almost all local taxes levied in this kingdom are direct, the coal duty of the City of London, and a few similar imposts, being the chief exceptions.

App. No. 9.

The following Account shows the proportions of direct and indirect taxation in Great Britain and Ireland respectively, both as compared with each other, and with the total receipt of such taxation in each country. The proportions of the population of each country are also shown. It may be observed that the proportions of revenue raised by taxes on articles of general consumption in each country, being paid by the whole mass of the community, must be more nearly in the ratio of the population than the proportions of direct taxation, paid by the more wealthy class only. In fact, the indirect taxes of Customs and Excise, nearly all of which are duties upon articles of general consumption, may almost be considered as taxes on population, and the direct taxes as taxes on property.

AN ACCOUNT of the GROSS RECEIPT of REVENUE, after deducting Drawbacks, &c., in *Great Britain* and *Ireland* respectively, for the Years 1858–9, 1859-60, and 1860-1, together with the Total and Average Amount; and for the Years 1861–2, 1862–3, and 1863–4, and the Total and Average Amount, under the following heads, *viz.*,

Col. 1. From Taxes in Great Britain from which Ireland was exempt;
Col. 2. From Customs, Excise, Stamps, and Income and Property Tax, imposed equally on both Countries;
Col. 3. From the following Articles of General Consumption—Tea, Coffee, Sugar, Wine, Foreign Spirits, Tobacco, British Spirits, and Malt, included in col. 2;
Col. 4. From other Indirect (though partly Direct) Taxation, included in col. 2;
Col. 5. From Property and Income Tax, included in col. 2;
Col. 6. From Probate Duty, and Legacy and Succession Duty, assumed to be other Direct Taxation, included in col. 2;
Col. 7. From Total Indirect Taxation, included in col. 2 (Total of cols. 3 and 4);
Col. 8. From Total Direct Taxation included in col. 2 (Total of cols. 5 and 6);
Showing also the Proportions per Cent. of the Average Amounts of the Total Receipts of the two Countries under each head, in each of the Triennial Periods, for Great Britain and Ireland respectively.

GREAT BRITAIN.

	Col. 1. Taxes in Great Britain from which Ireland is exempt.	Col. 2. Customs, Excise, Stamps, and Income and Property Tax, imposed equally on both Countries.		Col. 3. Revenue from Articles of General Consumption; included in Col. 2.		Col. 4. Revenue from other Indirect (though partly Direct) Taxation; included in Col. 2.		Col. 5. Property and Income Tax; included in Col. 2.		Col. 6. Probate Duty, and Legacy and Succession Duty, assumed to be other Direct Taxation; included in Col. 2.		Col. 7. Total Indirect Taxation; included in Col. 2 (Total of Cols. 3 and 4).		Col. 8. Total Direct Taxation; included in Col. 2 (Total of Cols. 5 and 6).	
	Amount.	Amount.	Proportion Per Cent.	Amount.	Proportion Per Cent.	Amount.	Proportion Per Cent.	Amount.	Proportion Per Cent.	Amount.	Proportion Per Cent.	Amount.	Proportion Per Cent.	Amount.	Proportion Per Cent.
	£.	£.		£.		£.		£.		£.		£.		£.	
1858–9	3,754,434	49,760,507	–	30,783,352	–	9,659,898	–	6,100,857	–	3,216,400	–	40,443,250	–	9,317,257	–
1859–60	3,860,564	54,934,520	–	32,863,483	–	10,002.778	–	8,947,774	–	3,120,485	–	42,866,261	–	12,068,259	–
1860–61	3,778,015	55,206,431	–	32,049,332	–	9,668,395	–	10,228,173	–	3,260,531	–	41,717,727	–	13,488,704	–
TOTAL	11,393,013	159,901,458	–	95,696,167	–	29,331,071	–	25,276,804	–	9,597.416	–	125,027,238		34,874,220	
Average	3,797,671	53,300,486	89·26	31,898,722	86·75	9,777,024	93·5	8,425,601	92·8	3,199,139	93·8	41,675,746	88·2	11,624,740	93·

IRELAND.

1858–9	–	–	6,150,478	–	4,761,762	–	657,653	–	509,245	–	221,818	–	5,419,415	–	731,063	–
1859–60	–	–	6,780,272	–	5,172,203	–	665,453	–	718,368	–	224,248	–	5,837,636	–	942,616	–
1860–61	–	–	6,312,937	–	4,686,281	–	708,180	–	728,888	–	189,588	–	5,394,461	–	918,476	–
TOTAL	–	–	19,243,687	–	14,620,246	–	2,031,286	–	1,956,501	–	635,654	–	16,651,532	–	2,592,155	–
Average	–	–	6,414,562	10·74	4,873,415	13·25	677,095	6·5	652,167	7·2	211,885	6·2	5,550,510	11·8	864,052	7·

GREAT BRITAIN.

1861–2	3,775,873	53,931,218	–	32,285,137	–	8,503,441	–	9,755,038	–	3,386,702	–	40,788,578	–	13,142,640	–
1862–3	3,812,722	53,702,621	–	32,112,136	–	8,386,259	–	9,808,299	–	3,485,927	–	40,498,395	–	13,294,226	–
1863–4	3,919,584	53,265,889	–	32,512,422	–	8,788,230	–	8,479,866	–	3,485,371	–	41,300,652	–	11,965,237	–
TOTAL	11,508,179	160,939,728	–	96,909,695	–	25,677,930	–	28,044,103	–	10,358,000	–	122,587,625	–	38,402,103	–
Average	3,836,060	53,663,243	89·5	32,303,232	87·28	8,559,310	92·6	9,348,034	93·3	3,452,667	91·2	40,862,542	88·3	12,800,701	93·5

IRELAND.

1861–2	–	–	6,476,128	–	4,888,405	–	685,498	–	715,269	–	186,956	–	5,573,903	–	902,225	–
1862–3	–	–	6,212,495	–	4,626,316	–	698,022	–	674,289	–	213,868	–	5,324,338	–	888,157	–
1863–4	–	–	6,136,878	–	4,616,015	–	660,875	–	622,128	–	237,860	–	5,276,890	–	859,988	–
TOTAL	–	–	18,825,501	–	14,130,736	–	2,044,395	–	2,011,686	–	638,684	–	16,175,131	–	2,650,370	–
Average	–	–	6,275,167	10·5	4,710,245	12·72	681,465	7·4	670,562	6·7	212,895	5·8	5,391,710	11·7	883,457	6·5

N.B.—The Proportion of the Average Numbers of the Population of Great Britain and Ireland respectively, in each of these Triennial Periods, may be taken as 8 to 2. (*See* page 102.)

App. No. 9.

PROPORTION per Cent. of Gross Revenue in each Country from Customs, Excise, Stamps, and Income and Property Tax (column 2), as contributed under the following Heads:—

		Col. 3. Taxes on Articles of General Consumption.	Col. 4. Other Indirect (though partly Direct) Taxation.	Col. 5. Property and Income Tax.	Col. 6. Probate Duty and Legacy and Succession Duty.	Col. 7. TOTAL Indirect Taxation.	Col. 8. TOTAL Direct Taxation.
Average of 1858–9 to 1860–61	Great Britain	59·9	18·3	15·8	6·	78·2	21·8
	Ireland	75·9	10·6	10·2	3·3	86·5	13·5
Average of 1861–2 to 1863–4	Great Britain	60·1	16·	17·4	6·5	76·1	23·9
	Ireland	75·	10·9	10·7	3·4	85·9	14·1

The amounts of the *proportionate* local taxation of Great Britain and Ireland in 1863–4, are shown in Appendix 7, page 120, to be 13,765,853 *l.* and 1,816,275 *l.*, being 88·34 and 11·66 per cent. respectively; but these amounts constitute a portion only of the total local taxation, the whole amount of which in each country cannot be ascertained from the Returns furnished to Parliament. The direct local taxation cannot, therefore, be included in the preceding comparative and proportionate statement.

UNCREDITED REVENUE.

In the preceding accounts, the amounts of the revenue of each country are stated as they appear in the public accounts, no allowance being made for what is termed uncredited revenue, or the amount of revenue paid in and credited to one country for duties upon articles consumed in the other.

There was a provision in the 8th section of the 6th Article of the Treaty of Union that all duties charged on the import of foreign or colonial goods into either country should, on their export to the other, be either drawn back, or the amount, if any be retained, should be placed to the credit of the country to which they should be so exported, so long as the expenditure of the United Kingdom should be defrayed by proportional contributions.

This provision was in accordance with the principle that neither country should levy any duty on the consumption of the other.—(*Castlereagh Correspondence*, 3d May 1800).

Report, 1864. Appendix, p. 334.

In a paper on uncredited revenue, laid before the Committee last Session by Mr. Dwyer, this provision is recited, and the question is asked, "Can a single instance of credit being given to Ireland under this section and clause be shown?"

No. 606 of 1822.

The best answer to this question will be found in the Reports of the Commissioners of Inquiry into the Revenue arising in Ireland, appointed by the Acts 1 & 2 Geo. 4, c. 90, and 3 Geo. 4, c. 37. Their Third Report is dated 26th July 1822, and signed by T. Wallace, T. Frankland Lewis, J. C. Herries, W. J. Lushington, and H. Berens. The subject of this Report is, the system adopted with respect to the countervailing duties imposed in Great Britain and in Ireland respectively upon particular and unequally-taxed articles of consumption, whether of foreign or domestic production, on their importation from one country to the other.

For the purpose of securing to each country the duty imposed upon all articles consumed within its limits, the Commissioners state that the following regulations were observed:—

"First. With respect to foreign and colonial goods, duty paid, transferred from one country to the other. The import duty is collected upon such transfer in the same manner as upon an original importation from abroad; the duty paid in the country where they were first imported being drawn back upon the proof of such second payment.

"Secondly. With respect to domestic manufactures, subject to internal duties. Such duties are drawn back on exportation from either country, and the internal duty payable on the like article in the other country is charged upon them on their arrival."

It was found that, in the year 1820, the following sums were paid back to persons who had

had already paid duties charged in one country on goods liable to a second duty on their entry into the other country:— App. No. 9.

	Duties Paid and Drawn Back.	
	In Great Britain.	In Ireland.
	£.	£.
Customs - - - - - - - -	163,000	44,724
Excise - - - - - - - -	49,007	—

£. 213,557 was paid in England on exciseable articles imported from Ireland in the same year.

Accounts are appended to the Report of the Commissioners, showing, in detail, the denominations, quantities, duties, and drawbacks of articles subject to excise regulations, exported from one country to the other, in each year from 1801 to 1820 inclusive.

The Commissioners pointed out the inconvenience to the merchant, the disadvantage to the community in Ireland, and the increased expense to the public arising out of the unnecessary continuance of the practice in the collection of these duties; that it was also injurious in another respect, that it was an unavoidable source of fraud upon the revenue. So long, however, as separate accounts were kept by the two countries, and their revenues administered by separate Treasuries, the principle by which the mode of collecting the duties was regulated became indispensable.

In their First Report, dated 21st February 1822, the Commissioners had stated that by far the greatest part of the import trade of Ireland consisted of goods brought direct from England. In their Third Report, the relative commerce of Ireland with foreign parts and with Great Britain, in the year 1820, was shown by the following example:—

	Vessels.	Tonnage.
Vessels and Tonnage Entered Inwards in all the Ports of Ireland:		
From Foreign Ports - - - -	767	117,518
From Great Britain - - - -	9,643	809,083
	Value of Imports.	**Duties thereon.**
Official Value of Imports, and Duties Collected thereon:		
	£.	£.
Foreign and Colonial Produce—		
From Foreign Ports - - - -	924,500	552,577
From Great Britain - - - -	1,810,272	753,200
British Produce and Manufactures - -	2,432,242	364,673

The Commissioners considered that the consolidation of the revenues of the two countries had removed the only ground for the continuance of a great part of these complex and onerous regulations, and had prepared the way for their reformation. They found no reason why, thenceforward, the intercourse between Great Britain and Ireland should be more impeded by fiscal regulations than the communication coastwise between England and Scotland, except in those articles still subjected to different rates of internal duties. They proposed a series of regulations, framed, as they conceived, in the interests of both countries, and in the spirit of the Act of Union, for the removal of all these unnecessary restrictions in the commercial intercourse between the two countries, under which all payment and repayment of duties in the cross-channel trade would entirely cease, except as to such articles of Excise as should be subject to duties in one country and not in the other, or to different rates of duty, in which last case the excess of the British duties should be drawn back upon the imports into Ireland from Great Britain, and paid upon the imports into Great Britain from Ireland. In framing the groundwork of these measures, the Commissioners added that they had proceeded upon the principle of removing, if possible, every remaining distinction between the revenue regulations of Ireland and those of Great Britain. This they conceived to be a very important object, and highly desirable upon all the grounds of sound policy and just economy, and also material to the future mercantile prosperity of Ireland.

The Commissioners had previously stated in their Second Report, dated 28th June 1822, that in their recommendations they were guided by a principle which they deemed of great importance, and never to be lost sight of in the relative situations of Ireland and No. 563 of 1822.

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Great Britain; that any inequality between the two countries in the general weight of public burdens, arising out of the different rates of taxation, so long as any such must remain (and they were far from thinking that the pressure upon Ireland should be increased at that time by an attempt to equalise them), ought to be confined, as much as possible, to those branches of the revenue which did not apply to subjects of commercial exchange.

No. 634 of 1822.

The Fourth Report of the Commissioners, dated 26th July 1822, was upon the subject of the "Union," or "Protecting" duties, as they were termed, being duties originally imposed with a view to protect the manufacturers of one country from the effects of the industry or the natural advantages of the other, and which applied to articles either not manufactured, or only to a trifling degree, in Ireland. All those protecting duties, which previously stood at a higher rate, were fixed by the Treaty of Union, at 10*l.* per cent on the value, and were to continue at that amount till the year 1820. They had been continued by the Act 1 Geo. 4, c. 45, which provided for their gradual cessation and their extinction in 1840. The Commissioners stated that they conceived it to have been one of the essential principles upon which the Act of Union was founded, that the produce and manufactures of Great Britain and Ireland should be interchanged between the two countries with the same facility and freedom as between the different ports of Great Britain; and it appeared to them that the 6th Article of that Act, by which the future intercourse between the two countries was regulated, was framed with a view to secure the ultimate adoption of this principle, although, in consideration of certain existing interests, it was thought advisable to limit its immediate and general application. The Commissioners recommended the immediate cessation of many of these duties, and the more rapid extinction of the remainder. These recommendations were carried out by the Acts 4 Geo. 4, c. 26, and 5 Geo. 4, c. 22, under the last of which these Union duties wholly ceased from 5th April 1824.

The recommendations of the Commissioners as to the countervailing duties were also carried out by the Act 4 Geo. 4, c. 72, and the trade between Great Britain and Ireland was to be deemed a coasting trade under section 6 of the Act. Their more important recommendations for removing the restrictions upon the commercial intercourse of the two countries were carried out under section 9 of the Act 5 Geo. 4, c. 43, by which all drawbacks on English or Irish produce re-exported from either country to the other were to cease from 5th April 1824; and more especially by the Act 6 Geo. 4, c. 107, under which new general regulations of the Customs were established from 5th January 1826. Since this period these regulations have prevented the keeping of any record of goods imported duty free into either country, upon which duty had been already paid in the other country.

See No. 305 of 1842, p. 23.

See Appendix to Report, 1864, p. 333.

It will be seen, therefore, that up to 1823, when the trade between Great Britain and Ireland was assimilated to a coasting traffic, in every case the duties fell into the Exchequer of the country in which the articles were eventually consumed; that up to 1825 accounts were kept to show the quantities of articles shipped from one country to the other; but that from 1825 there is an absolute want of any record of the trade between the two countries, and in the absence of the requisite data, it is impossible to make even what might be considered a distant approach towards accuracy in the computation of the uncredited revenue of the two countries.

The only exception in which it is possible to make such computation is in respect of the duty on British spirits, obtainable by means of the permit system. Such computation for the year 1863 is readily made from the information contained in the Return, No. 161, of Session 1864, and is shown in the following account:—

An Account of the Number of Gallons of British Spirits upon which Duty was Paid in *Great Britain* and *Ireland* respectively, and which were removed from one Country to the other in the Year 1863, showing the Amount of Duty on the Balance of such Duty-paid Spirits removed from Ireland to Great Britain.

In the Year 1863.	Number of Gallons.	Duty, 10*s.* per Gallon.
		£.
Proof British Spirits removed from Ireland to Great Britain - - - - - - - - -	770,440	
Proof British Spirits removed from Great Britain to Ireland - - - - - - - - -	11,579	
Balance of Duty paid Proof British Spirits removed from Ireland to Great Britain -	758,861	379,430

With

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With respect to the principal articles of consumption in each country charged with customs duties, it is stated in the Return No. 501, of Session 1864, which shows the quantities and amount of duty in the years 1841, 1851, 1861, 1862, and 1863, that in consequence of the Custom House Registry taking no cognizance of goods removed from one country to the other, after the duties to which they are equally subject on both sides of the Channel have already been levied, such quantities do not represent the domestic consumption of Great Britain or of Ireland separately; that generally, and in most cases, the consumption of Great Britain appears to be somewhat greater, and the consumption of Ireland somewhat less, than its real amount. In the case of sugar particularly, it is known that a large and increasing proportion of the quantity consumed in Ireland has of late years been received, duty free, in the form of "crushed sugar," from the refineries on the Clyde.

Data relied on in Treaty of Union—How far now Applicable to ascertain the Relative Ability of the Two Countries.

It may next be considered how far the data relied on in the Treaty of Union for determining the relative ability of each country to contribute to the Imperial expenditure, afford the means at the present time of ascertaining such ability, and how far such data indicate "circumstances which may appear to demand any particular exemptions or abatements in Ireland from taxation imposed on Great Britain."

It was provided in the 7th Article of the Treaty of Union, that at the end of 20 years from the Union, and afterwards from time to time at periods not more distant than 20, nor less than seven years from each other, *unless in the meantime it should be no longer necessary to regulate the respective contributions of the two countries according to any specific proportions, as therein provided, and which contingency has actually occurred* (*see* p. 2), the future expenditure of the United Kingdom, other than the charges of the separate debt, should be defrayed in such proportion as Parliament should deem just and reasonable, upon a comparison of the following data:—

I. The real value of the exports and imports of the respective countries, upon an average of the three years next preceding the period of revision.

II. The value of the following articles consumed within the respective countries on a similar average; viz., beer, spirits, sugar, wine, tea, tobacco, and malt.

III. The aggregate proportion resulting from both these considerations combined.

IV. The amount of income of each country, estimated from the produce for the same period of a general tax, if such should have been imposed on the same descriptions of income in both countries.

I.—Real Value of Exports and Imports.

The average real value of the exports and imports of each country, quoted by Lord Castlereagh in 1800,* appears to have been specially computed for the occasion; for, although since 1798, when the imposition of the "convoy duty" being an *ad valorem* tax laid on exports, exporters have since been made to declare, in every case, the value of the articles which they export, and the total amount for each year has been annually returned to Parliament; yet, as regards the imports, no authentic information was obtained of their real value till 1854, since which period only their real value has been computed, and the total amount returned annually to Parliament.

McCulloch's Dictionary—Article, "Balance of Trade."

The mode in which the real value is ascertained is thus stated by the Customs Department: "In the case of the more numerous and considerable articles, which are entered at the Custom House by quantity alone, the value exhibited in the statistical record is obtained by a process of computation which combines the quantity with the average price of the several commodities. The average price is supplied to the inspector general of exports and imports, in part by some of the leading merchants and brokers in the City of London, and in part by three gentlemen who have peculiar facilities for watching the markets, and who receive a fixed remuneration from the Treasury, and who collect such prices from the ports of London, Liverpool, and Hull respectively."

But although the real value of the exports and imports of the United Kingdom can thus be

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* It was made a subject of complaint in the Irish Parliament, that no document showing the data upon which the estimate of the relative ability of the two countries was based was laid before Parliament. (*See* Debate, 6 June 1800.)

App. No. 9.

be accurately ascertained for every year since 1854, yet, as regards the exports and imports of Great Britain and Ireland respectively, as has been stated, there have been no official returns of the merchandise imported and exported between the two countries since 1825, under the regulations then established for the cross-channel trade, and from this date, only the direct imports and exports from and to foreign ports and British possessions abroad, are included in the annual Trade and Navigation Accounts. As, therefore, there is no official return of the merchandise imported into and exported from Ireland indirectly through the ports of Great Britain, any inference, as contemplated in the Act of Union, from the recorded value of the imports and exports of Ireland since 1825 must be wholly fallacious.

Subject to this remark, the following account is furnished, showing also the official value of the exports and imports of each country upon an average of the three years preceding 1804, 1817, 1846, and 1864, together with the real value for the same periods, so far as it can be given. This is all the information that can be given under this head. The rates at which all articles of export and import are officially valued having been fixed so far back as 1696, the official values thus appear to afford some evidence of the relative fluctuation in quantities, so far as regards a comparison between the commerce of the two countries, and its progress from 1801 to 1816. But the official value is not considered to bear any assignable relation to the actual value.

See 1st Report on Customs, 1857, App. P. pa. 119.

AN ACCOUNT of the OFFICIAL VALUE of the EXPORTS and IMPORTS of *Great Britain* and *Ireland* respectively, in each of the Three Years ending in 1804, 1816, 1845, and 1863; the Total and Average Amount of each of these Triennial Periods; showing also the Real Value, so far as it can be given.

	GREAT BRITAIN.				IRELAND.			
	Exports.		Imports.	TOTAL.	Exports.		Imports.	TOTAL.
	Native Produce, British and Irish.	Foreign and Colonial.			Native Produce.	Foreign and Colonial.		
	£.	£.	£.	£.	£.	£.	£.	£.
Official Value - 1802	26,993,130	14,418,837	25,647,412	67,059,379	4,500,989	195,885	5,619,453	10,316,327
1803	22,252,028	9,326,468	21,643,577	53,222,073	4,273,003	130,507	4,869,830	9,273,340
1804	23,934,292	10,515,574	23,986,869	58,436,735	4,525,768	147,838	5,279,026	9,952,632
Total - - - £.	73,179,450	34,260,879	71,277,858	178,718,187	13,299,760	474,230	15,768,309	29,542,299
Average - - £.	24,393,150	11,420,293	23,759,286	59,572,729	4,433,253	158,076	5,256,103	9,847,433
Real Value - - 1802	48,500,683	- -	- -	- -	7,640,140	—	—	—
1803	40,100,870	- -	- -	- -	not recorded.	—	—	—
1804	40,349,642	- -	- -	- -	not recorded.	—	—	—
Total - - - £.	128,951,195	- -	- -	- -	7,640,140	—	—	—
Average - - £.	42,983,732	- -	- -	- -	7,640,140	—	—	—
Official Value - 1814	36,092,167	20,499,347	36,559,788	93,151,302	6,053,635	536,615	6,688,471	13,278,721
1815	44,053,455	16,930,439	35,089,650	96,073,544	6,224,220	307,586	5,637,119	12,168,925
1816	36,714,354	14,545,933	30,106,818	81,367,105	5,959,332	228,791	4,693,746	10,881,869
Total - - - £.	116,859,976	51,975,719	102,656,256	271,491,951	18,237,187	1,072,992	17,019,336	36,329,515
Average - - £.	38,953,325	17,325,239	34,218,752	90,497,317	6,079,062	357,664	5,673,112	12,109,838
Real Value - - 1814	47,851,453	- -	- -	- -	12,528,083	—	—	—
1815	53,217,445	- -	- -	- -	11,228,772	—	—	—
1816	42,942,950	- -	- -	- -	8,410,861	—	—	—
Total - - - £.	144,011,848	- -	- -	- -	32,167,716	—	—	—
Average - - £.	48,003,949	- -	- -	- -	10,722,572	—	—	—

		GREAT BRITAIN.				IRELAND.			
		Exports.		Imports.	Total.	Exports.		Imports.	Total.
		Native Produce, British and Irish.	Foreign and Colonial.			Native Produce.	Foreign and Colonial.		
		£.	£.	£.	£.	£.	£.	£.	£.
Official Value	1843	117,574,563	13,947,513	68,433,050	199,955,126	302,715	8,600	1,660,303	1,971,618
	1844	131,338,347	14,387,518	73,547,788	219,273,653	226,156	9,728	1,893,767	2,129,651
	1845	134,385,892	16,259,126	83,330,609	233,975,627	213,224	21,744	1,951,349	2,186,317
Total	£.	383,298,802	44,594,157	225,311,447	653,204,406	742,095	40,072	5,505,419	6,287,586
Average	£.	127,766,267	14,864,719	75,103,815	217,734,802	247,365	13,357	1,835,139	2,095,862
Real Value	1843	51,932,056	- -	- -	- -	346,393	—	—	—
	1844	58,316,315	- -	- -	- -	267,977	—	—	—
	1845	59,837,660	- -	- -	- -	273,421	—	—	—
Total	£.	170,086,031	- -	- -	- -	887,791	—	—	—
Average	£.	56,695,343	- -	- -	- -	295,930	—	—	—
Official Value	1861	289,110,244	50,143,513	163,964,004	503,217,761	244,942	14,649	7,248,545	7,508,136
	1862	240,515,786	50,948,435	152,813,458	444,277,679	205,073	8,521	7,885,598	8,099,192
	1863	257,980,145	54,908,412	164,240,553	477,129,110	218,406	6,225	7,673,299	7,897,930
Total	£.	787,606,175	156,000,360	481,018,015	1,424,624,550	668,421	29,395	22,807,442	23,505,258
Average	£.	262,535,392	52,000,120	160,339,338	474,874,850	222,807	9,798	7,602,481	7,835,086
Real Value	1861	124,890,535	34,511,573	209,871,962	369,274,070	212,279	18,111	7,613,062	7,843,452
	1862	123,789,261	42,166,996	217,773,030	383,729,287	203,003	8,874	7,943,946	8,155,823
	1863	146,417,039	50,292,034	242,202,958	438,912,031	185,303	8,495	6,700,744	6,894,542
Total	£.	395,096,835	126,970,603	669,867,950	1,191,915,388	600,585	35,480	22,257,752	22,893,817
Average	£.	131,698,945	42,323,534	223,282,650	397,305,129	200,195	11,826	7,419,251	7,631,272

The following abstracts from this Account show the information which it affords of the proportionate commerce of the two countries in 1804 and 1816, when the estimated values can be fully given, as well as of the relative commercial progress of the two countries in 1816 as compared with 1804.

I.—An Abstract Account of the Average Total Amount of the Official Values of the Exports and Imports of *Great Britain* and *Ireland* respectively, in each of the Three Years ending 1804 and 1816; showing the relative proportions per Cent. at each Period, and the Increase per Cent. of each Country, in 1816, as compared with the former Period.

	Average, 1802-3-4.		Average, 1814-15-16.		Increase in 1814-15-16.	
	Amount.	Proportion per Cent.	Amount.	Proportion per Cent.	Amount.	Per Cent.
	£.		£.		£	
Great Britain - -	59,572,729	85·9	90,497,317	88·2	30,924,588	52·
Ireland - - -	9,847,433	14·1	12,109,838	11·8	2,262,405	23·

II.—A similar Account of the Real Value of the Exports of Native Produce for the same Periods.

	Average, 1802-3-4.		Average, 1814-15-16.		Increase in 1814-15-16.	
	Amount.	Proportion per Cent.	Amount.	Proportion per Cent.	Amount.	Per Cent.
	£.		£.		£.	
Great Britain - -	42,983,732	84·9	48,003,949	81·7	5,020,217	11·7
Ireland - - -	7,640,140	15·1	10,722,572	18·3	3,082,432	40·3

Number and Tonnage of Vessels.

The only authentic evidence of the progress of the commerce of Great Britain and Ireland respectively from 1801, that can be given, is a statement of—

I. The number and tonnage of vessels annually entering into and clearing out of the several ports of each country: these being officially recorded not only as regards the trade with foreign ports, but also between the ports of Great Britain and Ireland; and—

II. The number and tonnage of vessels belonging to the several ports of each country at the close of the several years. These will be seen in the following Accounts:—

I. An Account of the Number and Tonnage of Vessels entered Inwards and cleared Outwards at Ports of *Great Britain* and *Ireland* respectively, in the following years; distinguishing those from and to *Great Britain* and *Ireland*, and those from and to Foreign Countries.

Note.—In the Years 1814, 1815, and 1816, the Trade and Navigation Returns do not distinguish the number and tonnage of Vessels in the Foreign Trade from those in the Coasting Trade between Great Britain and Ireland; they distinguish only the British, Irish, and Foreign Vessels and Tonnage.

There was no Registry of Ships cleared outwards from Ireland until 1802.

In the Tonnage of Vessels coasting between Great Britain and Ireland, the Ships and Cargoes only are included, not the Ballast. In the Tonnage of Vessels employed in the Foreign Trade, the Ballast is included. This difference, however, will hardly affect a just comparison as respects the relative commerce of the two countries.

The Accounts for the several years up to 1861 are taken from the Trade and Navigation Accounts annexed to the Annual Finance Accounts. Those for 1861-2-3 are taken from the Annual Trade and Navigation Accounts published separately. Vessels merely calling at the Ports are not included.

Foreign Trade.

	Great Britain.						Ireland.					
	Entered Inwards.		Cleared Outwards.		Total.		Entered Inwards.		Cleared Outwards.		Total.	
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
1802 - -	11,505	1,807,969	10,823	1,638,313	22,328	3,446,282	1,011	145,833	831	129,833	1,842	275,666
1803 - -	10,425	1,744,032	9,077	1,517,013	19,502	3,261,045	1,203	178,302	911	149,800	2,114	328,102
1804 - -	8,998	1,505,627	9,075	1,493,789	18,073	2,999,416	1,026	144,946	911	141,724	1,937	286,670
Total - -	30,928	5,057,628	28,975	4,649,115	59,903	9,706,743	3,240	469,081	2,653	421,357	5,893	890,438
Average -	10,309	1,685,876	9,658	1,549,705	19,967	3,235,581	1,080	156,360	884	140,452	1,964	296,813

Coasting Trade between Great Britain and Ireland.

1802 - -	5,850	465,605	5,541	449,476	11,391	915,081	6,589	546,647	6,041	516,611	12,630	1,063,258
1803 - -	5,823	508,367	5,657	502,369	11,480	1,010,736	6,708	584,148	6,013	543,836	12,721	1,127,984
1804 - -	5,681	497,059	6,149	557,346	11,830	1,054,405	6,993	635,991	5,713	527,358	12,706	1,163,349
Total - -	17,354	1,471,031	17,347	1,509,191	34,701	2,980,222	20,290	1,766,786	17,767	1,587,805	38,057	3,354,591
Average -	5,784	490,343	5,782	503,064	11,567	993,407	6,763	588,928	5,922	529,268	12,686	1,118,197

Total from and to All Parts.

1802 - -	17,355	2,273,574	16,364	2,087,789	33,719	4,361,363	7,600	692,480	6,872	646,444	14,472	1,338,924
1803 - -	16,248	2,252,399	14,734	2,019,382	30,982	4,271,781	7,911	762,450	6,924	693,636	14,835	1,456,086
1804 - -	14,679	2,002,686	15,224	2,051,135	29,903	4,053,821	8,019	780,937	6,624	669,082	14,643	1,450,019
Total - -	48,282	6,528,659	46,322	6,158,306	94,604	12,686,965	23,530	2,235,867	20,420	2,009,162	43,950	4,245,029
Average -	16,094	2,176,219	15,440	2,052,769	31,535	4,228,988	7,843	745,289	6,806	669,721	14,650	1,415,010

From and to All Parts.

1814 - -	21,174	2,413,186	21,106	2,447,268	42,280	4,860,454	10,242	904,677	9,901	883,432	20,143	1,788,109
1815 - -	21,673	2,649,421	22,266	2,777,366	43,939	5,426,787	10,799	942,864	10,483	935,648	21,282	1,878,512
1816 - -	19,579	2,284,467	19,643	2,317,735	39,222	4,602,202	10,203	902,476	9,481	856,578	19,684	1,759,054
Total - -	62,426	7,347,074	63,015	7,542,369	125,441	14,889,443	31,244	2,750,017	29,865	2,675,658	61,109	5,425,675
Average -	20,808	2,449,024	21,005	2,514,123	41,813	4,963,147	10,414	916,672	9,955	891,886	20,369	1,808,558

Foreign Trade.

1819 - -	15,079	2,183,072	13,120	1,959,560	28,199	4,142,632	1,110	168,740	925	159,283	2,035	328,023
1820 - -	13,990	1,998,153	12,375	1,863,938	26,365	3,862,091	767	117,518	696	118,898	1,463	236,416
1821 - -	13,271	1,878,992	11,804	1,774,145	25,075	3,653,137	795	116,538	621	98,718	1,416	215,256
Total - -	42,340	6,060,217	37,299	5,597,643	79,639	11,657,860	2,672	402,796	2,242	376,899	4,914	779,695
Average -	14,113	2,020,072	12,433	1,865,881	26,546	3,885,953	891	134,265	747	125,633	1,638	259,898

Coasting Trade between Great Britain and Ireland.

	GREAT BRITAIN.						IRELAND.					
	Entered Inwards.		Cleared Outwards.		Total.		Entered Inwards.		Cleared Outwards.		Total.	
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
1819	8,626	708,167	9,751	795,495	18,377	1,503,662	10,391	855,120	9,905	823,191	20,296	1,678,311
1820	7,854	680,648	8,541	734,716	16,395	1,415,364	9,643	809,083	9,229	783,750	18,872	1,592,833
1821	8,558	751,218	9,266	801,007	17,824	1,552,225	9,929	844,997	9,440	819,648	19,369	1,664,645
Total	25,038	2,140,033	27,558	2,331,218	52,596	4,471,251	29,963	2,509,200	28,574	2,426,589	58,537	4,935,789
Average	8,346	713,344	9,186	777,073	17,532	1,490,417	9,988	836,400	9,524	808,863	19,512	1,645,263

Total from and to All Parts.

	GREAT BRITAIN.		IRELAND.	
	Vessels.	Tonnage.	Vessels.	Tonnage.
1819	46,576	5,646,294	22,331	2,006,334
1820	42,760	5,277,455	20,335	1,829,249
1821	42,899	5,205,362	20,785	1,879,901
Total	132,235	16,129,111	63,451	5,715,484
Average	44,078	5,376,370	21,150	1,905,161

Foreign Trade.

	GREAT BRITAIN.						IRELAND.					
	Entered Inwards.		Cleared Outwards.		Total.		Entered Inwards.		Cleared Outwards.		Total.	
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
1843	27,099	4,665,817	27,446	4,828,851	54,545	9,494,668	942	181,479	597	148,415	1,539	329,894
1844	28,224	4,842,160	28,908	5,128,175	57,132	9,970,335	1,071	207,441	696	168,993	1,767	376,434
1845	31,413	5,770,938	31,687	5,822,028	63,100	11,592,966	1,239	274,780	840	209,559	2,079	484,339
Total	86,736	15,278,915	88,041	15,779,054	174,777	31,057,969	3,252	663,700	2,133	526,967	5,385	1,190,667
Average	28,912	5,092,971	29,347	5,259,685	58,259	10,352,656	1,084	221,233	711	175,655	1,795	396,889

Coasting Trade between Great Britain and Ireland.

1843	10,104	1,255,901	16,758	1,670,574	26,862	2,926,475	16,996	1,710,131	10,467	1,249,993	27,463	2,960,124
1844	10,147	1,349,273	16,948	1,817,756	27,095	3,167,029	17,714	1,861,621	10,959	1,379,843	28,673	3,241,464
1845	11,481	1,511,023	19,785	2,111,481	31,266	3,622,504	19,081	2,046,202	11,543	1,505,547	30,624	3,551,749
Total	31,732	4,116,197	53,491	5,599,811	85,223	9,716,008	53,791	5,617,954	32,969	4,135,383	86,760	9,753,337
Average	10,577	1,372,065	17,830	1,866,604	28,407	3,238,669	17,930	1,872,651	10,989	1,378,461	28,920	3,251,112

Total from and to All Parts.

	GREAT BRITAIN.		IRELAND.	
	Vessels.	Tonnage.	Vessels.	Tonnage.
1843	81,407	12,421,143	29,002	3,290,018
1844	84,227	13,137,364	30,440	3,617,898
1845	94,366	15,215,470	32,703	4,036,088
Total	260,000	40,773,977	92,145	10,944,004
Average	86,666	13,591,325	30,715	3,648,001

Foreign Trade.

(Trade and Navigation Accounts, 1864, p. 52.)

	GREAT BRITAIN.						IRELAND.					
	Entered Inwards.		Cleared Outwards.		Total.		Entered Inwards.		Cleared Outwards.		Total.	
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
1861	52,971	12,525,687	55,136	13,112,278	108,107	25,637,965	2,292	653,932	920	303,774	3,212	957,706
1862	53,350	12,459,708	55,401	13,154,034	108,751	25,613,742	2,110	631,382	808	290,315	2,918	921,697
1863	52,868	12,643,369	54,776	13,263,793	107,644	25,907,162	2,040	612,694	607	218,877	2,647	831,571
Total	159,189	37,628,764	165,313	39,530,105	324,502	77,158,869	6,442	1,898,008	2,335	812,966	8,777	2,710,974
Average	53,063	12,542,921	55,104	13,176,702	108,167	25,719,623	2,147	632,669	778	270,988	2,925	903,658

Coasting Trade between Great Britain and Ireland.*

(Trade and Navigation Accounts, 1864, p. 427.)

	Entered Inwards.		Cleared Outwards.		Total.	
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
1861	35,144	5,855,061	34,859	5,707,570	70,003	11,562,631
1862	34,836	5,847,318	34,880	5,773,341	69,716	11,620,659
1863	34,437	6,073,958	33,525	5,906,845	67,962	11,980,803
Total	104,417	17,776,337	103,264	17,387,756	207,681	35,164,093
Average	34,806	5,925,445	34,421	5,795,918	69,227	11,721,364

Total from and to All Parts.

	GREAT BRITAIN.		IRELAND.	
	Vessels.	Tonnage.	Vessels.	Tonnage.
1861	143,109	31,419,281	38,214	6,739,022
1862	143,609	31,424,072	37,776	6,732,027
1863	141,625	31,897,564	36,628	6,821,973
Total	428,343	94,740,917	112,618	20,293,022
Average	142,781	31,580,306	37,539	6,764,341

Recapitulation.

An Account of the Total Number of Vessels and Tonnage (including their repeated Voyages) that Entered Inwards and Cleared Outwards at the several Ports of Great Britain and Ireland respectively, and showing their Proportions per Cent. in the following years:—

	VESSELS.				TONNAGE.				Increase per Cent. over Average of 1802–3–4.			
	Great Britain.		Ireland.		Great Britain.		Ireland.		Vessels.		Tonnage.	
	Number.	Proportion per Cent.	Number.	Proportion per Cent.	Amount.	Proportion per Cent.	Amount.	Proportion per Cent.	Great Britain.	Ireland.	Great Britain.	Ireland.
Average:												
1802–3–4	31,535	68·28	14,650	31·72	4,228,988	74·93	1,415,010	25·07	–	–	–	–
1814–5–6	41,813	67·24	20,369	32·76	4,963,147	73·29	1,808,558	26·71	32·59	39·04	17·36	27·81
1819–20–21	44,078	67·57	21,150	32·43	5,376,370	73·84	1,905,161	26·16	39·77	44·37	27·13	34·64
1843–4–5	86,066	73·83	30,715	26·17	13,591,325	78·84	3,648,001	21·16	174·82	109·66	221·4	157·8
1861–2–3	142,781	79·18	37,539	20·82	31,580,306	82·36	6,764,341	17·64	352·8	156·24	646·76	378·04

* The Accounts of the Coasting Trade between Great Britain and Ireland for the preceding periods show the vessels and tonnage to and from the ports of each Kingdom separately. This Account for 1861–2–3 shows the total amount for the ports of both countries together. In the following Account this total amount is divided equally for each country, in order to show, together with the Foreign Trade, the total from and to all ports.

The Trade and Navigation Accounts for 1861–2–3, show not only the Coasting Trade between Great Britain and Ireland, but also between the ports of the same country. This Home Coasting Trade is not included in the above-stated Account, as it is not shown in the published Accounts for the preceding periods. The Total of this Home Coasting Trade in the year 1863 was as follows:

Total Coasting Trade from and to Ports of the same Country.

	GREAT BRITAIN.		IRELAND.	
	Vessels.	Tonnage.	Vessels.	Tonnage.
1863	230,062	22,756,160	5,657	336,576

App. No. 9.

2.—An Account of the Number of Vessels, with the Amount of their Tonnage, which belonged to the several Ports of *Great Britain* and *Ireland* respectively, at the close of the following Years:—

Note.—Under section 33 of "The Mercantile Shipping Act of 1854," 17 and 18 Vict. c. 104, which embodied the existing regulations as to the registry of ships, the port or place at which any British Ship is registered for the time being shall be considered her Port of Registry, or the port to which she belongs. Under sections 89 and 90, the registry of any ship may be transferred from one port to another upon due application from all parties appearing on the register to be interested in such ship.

	GREAT BRITAIN.		IRELAND.	
	Vessels.	Tonnage.	Vessels.	Tonnage.
1802	15,750	1,801,458	1,031	56,510
1803	16,451	1,901,146	1,065	58,873
1804	17,186	1,990,136	1,061	58,060
Total	49,387	5,692,740	3,157	173,443
Average	16,462	1,897,580	1,052	57,814
1814	19,885	2,329,782	1,183	61,769
1815	20,209	2,394,227	1,163	60,123
1816	20,400	2,416,504	1,178	63,229
Total	60,494	7,140,513	3,524	185,121
Average	20,164	2,380,171	1,174	61,707
1819	20,213	2,356,602	1,288	69,283
1820	20,148	2,342,712	1,325	70,092
1821	19,818	2,260,178	1,345	69,035
Total	60,179	6,959,492	3,958	208,410
Average	20,059	2,319,831	1,319	69,470
1843	21,150	2,758,968	2,002	198,469
1844	21,220	2,785,553	2,033	208,613
1845	21,482	2,848,638	2,139	224,899
Total	63,852	8,393,159	6,174	631,981
Average	21,284	2,797,719	2,058	210,660
1861	24,844	4,487,811	2,298	247,680
1862	25,187	4,611,687	2,338	248,504
1863	25,460	5,002,710	2,290	249,047
Total	75,491	14,102,208	6,926	745,231
Average	25,163	4,700,736	2,309	248,410

Recapitulation.

	VESSELS.				TONNAGE.				Increase per Cent. over Average of 1802, 1803, and 1804.			
	Great Britain.		Ireland.		Great Britain.		Ireland.		Vessels.		Tonnage.	
	Number.	Proportion per Cent.	Number.	Proportion per Cent.	Amount.	Proportion per Cent.	Amount.	Proportion per Cent.	Great Britain.	Ireland.	Great Britain.	Ireland.
Average:												
1802-3-4	16,462	94·	1,052	6·	1,897,580	97·	57,814	3·	—	—	—	—
1814-15-16	20,164	94·5	1,174	5·5	2,380,171	97·5	61,707	2·5	22·5	11·6	25·4	6·73
1819-20-21	20,059	93·83	1,319	6·17	2,319,831	97·1	69,470	2·9	21·85	25·4	22·25	20·16
1843-44-45	21,284	91·2	2,058	8·8	2,797,719	93·	210,660	7·	29·3	95·6	47·4	264·3
1861-62-63	25,163	91·6	2,309	8·4	4,700,736	94·98	248,410	5·02	52·8	119·5	147·7	329·7

App. No. 9.

II.—Value of Exciseable Articles Consumed.

The want of information since 1825 of the quantities, and consequently of the value, of articles imported for consumption into one country, after having paid duty on the other, renders it impossible to make any comparison of the value of the several exciseable articles stated in the Treaty of Union, upon which to base an estimate of the relative ability of each country to contribute to the expenditure of the United Kingdom.

All the information that can now be given as to the *quantities* of these exciseable articles consumed in each country, for the years 1841, 1851, 1861, 1862, and 1863, is shown in the Return No. 501, of Session 1864. The management of the revenue from most of these articles is now transferred to the Customs Department.

III.—Aggregate Value of Exports and Imports, and of Exciseable Articles Consumed.

For the same reasons these cannot now be ascertained.

IV.—Income Charged under the Income Tax Act.

This is the last of the data relied on in the Treaty of Union to ascertain the relative ability of the two countries, and the only remaining criterion by which it now appears possible to form a just judgment of such relative ability. The amounts of income and property charged under the several Schedules of the Income Tax Act in England and Wales, Scotland, and Ireland, respectively, in the first three years since the imposition of the income tax in Ireland, as well in the last three years, and the average amount in each triennial period, are seen in the following account, which has been prepared from information furnished by the Inland Revenue Department:—

An Account showing the Annual Amount of Property and Income charged under each Schedule of the Property and Income Tax Act, in *England* and *Wales*, *Scotland*, and *Ireland* respectively, in each of the following Years:—

England and Wales.

	Schedule A. Property in Lands, Tenements, &c.	Schedule B. Occupation of Lands, Tenements, &c.	Schedule C. Interest, &c. from Public Funds.	Schedule D. Profits of Trades, Professions, &c.	Schedule E. Salaries, Pensions, &c.	Total Amount of Property Charged.
	£.	£.	£.	£.	£.	£.
Year ended 5 April 1854	91,312,319	24,812,755	26,833,837	68,135,456	12,717,923	223,812,290
„ „ 1855	92,329,889	24,582,791	24,797,040	68,384,051	13,428,101	223,521,872
„ „ 1856	93,019,152	24,588,648	24,407,355	67,832,390	15,312,800	225,160,345
Total of the Three Years	276,661,360	73,984,194	76,038,232	204,351,897	41,458,824	672,494,507
Average £.	92,220,453	24,661,398	25,346,077	68,117,299	13,819,608	224,164,836
Year ended 5 April 1862	111,721,224	28,534,721	27,943,866	81,120,368	17,814,489	267,134,668
„ „ 1863	112,208,257	28,223,458	29,528,213	85,088,087	18,356,800	273,404,815
„ „ 1864	113,484,822	27,955,611	*29,500,000	87,308,125	17,871,256	276,119,814
Total of the Three Years	337,414,303	84,713,790	86,972,079	253,516,580	54,042,545	816,659,297
Average £.	112,471,434	28,237,930	28,990,693	84,505,527	18,014,181	272,219,766

Scotland.

Year ended 5 April 1854	11,161,348	2,885,123	-	6,872,705	730,314	21,649,490
„ „ 1855	11,301,813	2,954,084	-	6,858,865	701,953	21,816,715
„ „ 1856	11,558,331	3,044,207	-	6,718,656	769,855	22,091,049
Total of the Three Years	34,021,492	8,883,414	-	20,450,226	2,202,122	65,557,254
Average £.	11,340,497	2,961,138	-	6,816,742	734,041	21,852,418
Year ended 5 April 1862	13,742,214	3,847,121	-	7,893,125	1,054,837	26,537,297
„ „ 1863	13,853,218	3,881,881	-	8,234,777	1,106,235	27,076,111
„ „ 1864	13,997,417	3,624,384	-	8,536,217	986,777	27,144,795
Total of the Three Years	41,592,849	11,353,386	-	24,664,119	3,147,849	80,758,203
Average £.	13,864,283	3,784,462	-	8,221,373	1,049,283	26,919,401

* Estimated—Returns not complete.

IRELAND.

	Schedule A. Property in Lands, Tenements, &c.	Schedule B. Occupation of Lands, Tenements, &c.	Schedule C. Interest, &c. from Public Funds.	Schedule D. Profits of Trades, Professions, &c.	Schedule E. Salaries, Pensions, &c.	Total Amount of Property Charged.
	£.	£.	£.	£.	£.	£.
Year ended 5 April 1854 - -	11,767,810	2,695,680	1,451,205	4,621,069	861,324	21,397,088
„ „ 1855 - -	11,892,120	2,603,424	1,390,371	4,445,891	899,761	21,231,567
„ „ 1856 - -	11,878,545	2,574,684	1,371,045	4,336,674	925,767	21,086,715
Total of the Three Years -	35,538,475	7,873,788	4,212,621	13,403,634	2,686,852	63,715,370
Average - - - £.	11,846,158	2,624,596	1,404,207	4,467,878	895,617	21,238,457
Year ended 5 April 1862 - -	13,398,938	2,937,899	1,139,334	4,677,568	1,245,282	23,399,021
„ „ 1863 - -	13,494,091	2,938,923	1,124,400	4,673,743	1,237,046	23,468,203
„ „ 1864 - -	13,446,445	2,926,368	*1,120,000	4,366,971	1,154,810	23,014,594
Total of Schedule B. - -	40,339,474	8,803,190	3,383,734	13,718,282	3,637,138	69,881,818
Average - - - £.	13,446,491	2,934,397	1,127,911	4,572,761	1,212,379	23,293,939

* Estimated—Returns not complete.

The important question remains: Is the income tax imposed on the same description of income in both countries?

In order to give a satisfactory answer to this question, much fuller evidence is required, and more careful inquiry than has yet been made into the subject, either as regards the income included in the assessment in each country, or its valuation, more particularly under Schedules A. and B.

With respect to the income included in the assessment, there is not sufficient evidence to show what proportion the property charged under schedule B. bears to the total amount of property held in occupation in Great Britain and Ireland respectively, and what difference, if any, in one country, as compared with the other, may be caused by the number of small holdings, the occupiers of which escape the income tax assessment.

With respect to the valuation, in pursuance of the Act 15 & 16 Vict. c. 63, passed in 1852, one uniform valuation of lands and tenements in Ireland was directed to be made and used for all public and local assessments and other rating. Under sect. 11 of this Act all lands were to be separately valued "upon an estimate of the net annual value thereof with reference to the average prices of the several articles of agricultural produce hereinafter specified, all peculiar local circumstances in each case being taken into consideration, and all rates, taxes, and public charges, if any (except tithe rentcharge) being paid by the tenant."

In regard to houses and buildings, such valuation was to be made "upon an estimate of the net annual value thereof; that is to say, the rent for which, one year with another, the same might in its actual state be reasonably expected to let from year to year, the probable average annual cost of repairs, insurance, and other expenses (if any) necessary to maintain the hereditament in its actual state, and all rates, taxes, and public charges, if any (except tithe rentcharge) being paid by the tenant."

Under sect. 29 an annual revision was directed to be made of property altered or variable in its nature; and under sect. 34 a new general valuation was authorised to be

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made every 14 years. By sect. 39 the amount of the annual expenses of the valuation was authorised to be advanced out of the Consolidated Fund, to be repaid by grand jury presentments.

This Act was amended in 1854, by the 17 Vict. c. 8; but this Act did not alter the principle of valuation established by the Act of 1852.

In 1860, the Act 22 Vict. c. 4, directed that from 1 April 1860 one moiety only of the expenses of valuation now used as the basis of public general, as well as of local taxation in Ireland, shall be repaid by the counties to the Consolidated Fund.

It will be seen, therefore, that the property charged under the two schedules A. and B is assessed on a different principle in the two countries. In Great Britain, the property is assessed at its gross annual rental or value; in Ireland, at the net rental or value under the poor law valuation, deduction being made for repairs, insurance, &c. Some estimate of the excess charged upon Great Britain, as compared with Ireland, arising from this difference of valuation may be made from a statement made by Mr. Gladstone in his Budget speech of 18 April 1853. He estimated that about 80,000,000 *l.*, the gross income of land and houses paid the tax under schedule A in Great Britain, and that 16 per cent. was a fair deduction, and, in some instances, a very low one, which might be made from this amount for repairs, insurance, and arrears and abatement of rents, in order to show the difference between gross and net income.

With respect to the value of property assessed to the poor's rate in England and Wales, it is shown in the Annual Report to Parliament of the Poor Law Board, in 1864, p. 112, the statement being taken from the Return No. 491, of Session 1861, with respect to the parochial year 1855-56, that the gross estimated rental of property assessed to the poor's rate in England and Wales was 86,077,676 *l.*, whilst the net annual rateable value actually assessed was 71,840,271 *l.*, showing an average deduction upon the whole amount of 19·82 *l.* per cent.

It may be added, that the following proportionate differences appear in the amounts assessed to the poor's rate and the amounts charged for income tax under Schedule A., for England and Wales* and Ireland respectively, in the year 1855–56 :—

	Amount.	Proportionate Difference per Cent. in Excess charged for Income Tax.
England and Wales:	£.	
Rateable Value assessed to Poor Rate - -	71,840,271	—
Charged for Income Tax under Schedule A. -	93,019,152	29·48
Ireland:		
Net Annual Value rated for Poor Rate - -	11,709,934	—
Charged for Income Tax under Schedule A. -	11,878,545	1·44

Subject to these observations, the amounts and relative proportions per cent. of the property and income charged under the different schedules in Great Britain and Ireland respectively, upon an average of the three years ending in 1856 and in 1864, are shown in the following abstract of the preceding account; the increase per cent. in each country, in the latter as compared with the former period, is also shown:—

* The net annual value of property assessed to the poor's rate in England and Wales has been returned to Parliament in respect of four parochial years, 1840–41, 1846–47, 1849–50, and 1855–56 (*see* Report of Poor Law Board, 1864, p. 112). The amount of assessment upon which the poor rate is actually levied in Scotland does not appear to have been returned to Parliament. The gross rental liable to assessment is stated in the Return No. 329 of 1862, as given in the most recent Parliamentary Return, No. 408 of 1856, as follows:—

Scotland.	Amount.	Proportionate Difference per Cent. in Excess for Gross Rental.
	£.	£.
Gross Rental of Property assessed to Poor Rate -	11,827,064	2·33
Charged for Income Tax under Schedule A. - -	11,558,331	—

An Abstract Account of the Amount of Property charged under the different Schedules of the Property and Income Tax and of the Total Amount charged in *Great Britain* and *Ireland* respectively, upon an Average of the Three Years ending 5 April 1854, 1855, and 1856, and 5 April 1862, 1863, and 1864, showing the Proportion per Cent. of each Country, and the Increase per Cent. in each Country in the last Triennial period as compared with the first.

	Schedule A.		Schedule B.		Schedule C.		Schedule D.		Schedule E.		Total.	
	Amount.	Proportion per Cent.	Amount.	Proportion per Cent.	Amount.	Proportion per Cent.	Amount.	Proportion per Cent.	Amount.	Proportion per Cent.	Amount.	Proportion per Cent.
Average of 1853–4, 1854–5, and 1855–6:	£.	£.	£.	£.	£.	£.	£.	£.	£.	£.	£.	£.
Assessment charged:												
Great Britain - -	103,560,950	89·7	27,622,536	91·32	25,346,077	94·8	74,934,041	94·4	14,553,649	94·2	246,017,254	92·
Ireland - - -	11,846,158	10·3	2,624,596	8·68	1,404,207	5·2	4,467,878	5·6	895,617	5·8	21,238,457	8·
Average of 1861–2, 1862–3, and 1863–4:												
Assessment charged:												
Great Britain - -	126,335,717	90·4	32,022,392	91·6	28,990,693	96·2	92,726,900	95·3	19,063,464	94·	299,139,167	92·8
Ireland - - -	13,446,491	9·6	2,934,397	8·4	1,127,911	3·8	4,572,761	4·7	1,212,379	6·	23,293,939	7·2
Increase per Cent., *or Decrease per Cent. marked in Italic Figures*, of Assessment charged in each Country from 1854–5–6, to 1861–2–3:												
Great Britain - -	22,774,767	22·	4,399,856	15·9	3,644,616	14·38	17,792,859	23·8	4,509,815	31·	53,121,913	21·6
Ireland - - -	1,600,333	13·5	309,801	11·8	*276,296*	*19·6*	104,883	2·3	316,762	35·4	2,055,482	9·7

A similar Abstract Account of the Total Amounts charged under Schedules A., B., and D.

Total of Schedules A., B., and D.

	Great Britain.			Ireland.		
	Amount.	Proportion per Cent.	Increase per Cent.	Amount.	Proportion per Cent.	Increase per Cent.
	£.	£.	£.	£.	£.	£.
Assessment charged—Average of Three years ending 1856	206,117,527	91·6	- -	18,938,632	8·4	—
Assessment charged—Average of Three years ending 1863	251,085,009	92·3	21·8	20,953,649	7·7	10·6

The limited space of time allowed for preparing and laying before the Committee statistical information as to the relative ability of each country to bear the burden of taxation, and as to the relative progress of each country since the Union, does not admit of further details being now given, with the exception of the following accounts of the population of each country and the rate of increase since 1801, and of the agricultural statistics of Ireland.

AN ACCOUNT of the NUMBER of the POPULATION in *Great Britain* and in *Ireland* in each Decennial Period from 1801, showing the Proportion per Cent. in *England* and *Wales*, *Scotland*, and *Ireland*, and in the Islands in the British Seas, and the Rate of Increase *or Decrease*, together with the Rate of Increase up to the end of each Period, as compared with 1801; showing also the Number and Proportion of British-born Subjects residing in *Ireland*, and of Irish-born Subjects residing in *Great Britain*, according to the Census of 1861.

	1801.	1811.		1821.			1831.			1841.			1851.			1861.		
	Population.	Population.		Population.			Population.			Population.			Population.			Population.		
England and Wales	8,892,536	10,164,256	–	12,000,236	–	–	13,896,797	–	–	15,914,148	–	–	17,927,609	–	–	20,066,224	–	–
Scotland	1,608,420	1,805,864	–	2,091,521	–	–	2,364,386	–	–	2,620,184	–	–	2,888,742	–	–	3,062,294	–	–
Great Britain	10,500,956	11,970,120	–	14,091,757	–	–	16,261,183	–	–	18,534,332	–	–	20,816,351	–	–	23,128,518	–	–
Ireland	5,216,331	5,956,460	–	6,801,827	–	–	7,767,401	–	–	8,175,124	–	–	6,574,278	–	–	5,798,967	–	–
Islands in British Seas	78,000	80,000	–	89,508	–	–	103,710	–	–	124,040	–	–	143,126	–	–	143,447	–	–
TOTAL Population of the United Kingdom	15,795,287	18,006,580	–	20,983,092	–	–	24,132,294	–	–	26,833,496	–	–	27,533,755	–	–	29,070,932	–	–
	Proportion per Cent.	Proportion per Cent.	Decennial Rate of Increase per Cent.	Proportion per Cent.	Decennial Rate of Increase per Cent.	Rate of Increase per Cent. over 1801.	Proportion per Cent.	Decennial Rate of Increase per Cent.	Rate of Increase per Cent. over 1801.	Proportion per Cent.	Decennial Rate of Increase per Cent.	Rate of Increase per Cent. over 1801.	Proportion per Cent.	Decennial Rate of Increase *or Decrease* per Cent.	Rate of Increase per Cent. over 1801.	Proportion per Cent.	Decennial Rate of Increase *or Decrease* per Cent.	Rate of Increase per Cent. over 1801.
England and Wales	56·3	56·45	14·3	57·19	18·1	34·9	57·59	15·8	56·3	59·3	14·5	78·9	65·11	12·7	101·6	69·1	12·	125·6
Scotland	10·2	10·	12·3	9·97	15·8	30·	9·8	13·5	47·	9·77	10·9	62·9	10·5	10·2	79·6	10·5	6·	90·4
Great Britain	66·5	66·45	14·	67·16	17·7	34·2	67·39	15·4	54·9	69·07	14·	76·5	75·61	12·3	98·2	79·6	11·1	120·25
Ireland	33·	33·1	14·2	32·41	14·2	30·4	32·18	14·2	48·9	30·47	5·2	56·7	23·87	*19·6**	26·	19·9	*11·8**	11·2
Islands in British Seas	·5	·45	2·6	·43	12·	15·	·43	16·	33·	·46	19·6	59·	·52	15·4	83·5	·5	·2	83·9
TOTAL	100	100	–	100	–	–	100	–	–	100	–	–	100	–	–	100	–	–

* Decrease per cent.

Census, vol. 9, 1863, page 5.—Out of 10 parts of the Population of the United Kingdom, nearly 7 belong to England.
1 to Scotland.
2 to Ireland.

In 1861.

	In England and Wales.		In Scotland.		In Great Britain.		In Ireland.	
	Number of Persons.	Proportion per Cent.	Number of Persons.	Proportion per Cent.	Number of Persons.	Proportion per Cent.	Number of Persons.	Proportion per Cent.
English and Welsh	19,120,152	95·286	56,032	1·830	19,176,184	82·911	50,936	·880
Scotch	169,202	·843	2,785,804	90·970	2,955,006	12·776	16,925	·290
					22,131,190	95·687	67,861	1·170
Irish	601,634	2·998	204,083	6·664	805,717	3·485	5,720,686	98·650
Others	175,236	·873	16,375	·536	191,611	·828	10,420	·180
TOTAL	20,066,224	– –	3,062,294	– –	23,128,518	– –	5,798,967	—

It thus appears, that out of the total number of 22,199,051 British-born subjects residing in the United Kingdom, 22,131,190, or 99·694 per cent., were resident in Great Britain, and 67,861, or ·306 per cent., in Ireland; whilst out of the total number of 6,526,403 Irish-born subjects residing in the United Kingdom, 5,720,686, or 87·655 per cent. were resident in Ireland, and 805,717, or 12·345 per cent., in Great Britain.

IRELAND.

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AN ACCOUNT of the Number of Acres under Crops in *Ireland* in each Year from 1847, as shown in the Agricultural Statistics of *Ireland*, the Collection of which commenced in that Year, showing the Increase *or Decrease* per Cent. in 1864, as compared with 1847.

YEAR.	Cereals.	Meadow and Clover.	Green Crops, including Potatoes and Turnips.	Flax.	TOTAL Crops of all Kinds.
	Acres.	*Acres.*	*Acres.*	*Acres.*	*Acres.*
1847 - - -	3,313,579	1,138,946	727,738	58,312	5,238,575
1848 - - -	Incomplete -	Incomplete -	Incomplete -	Incomplete -	Incomplete.
1849 - - -	3,174,424	1,141,371	1,167,639	60,314	5,543,748
1850 - - -	3,149,556	1,200,124	1,317,572	91,040	5,758,292
1851 - - -	3,099,401	1,246,408	1,372,606	140,536	5,858,951
1852 - - -	2,976,606	1,270,713	1,354,887	137,008	5,739,214
1853 - - -	2,833,387	1,270,742	1,418,243	174,579	5,696,951
1854 - - -	2,743,736	1,257,864	1,417,607	151,403	5,570,610
1855 - - -	2,832,564	1,314,807	1,444,390	97,075	5,688,836
1856 - - -	2,785,208	1,302,787	1,559,241	106,311	5,753,547
1857 - - -	2,786,828	1,369,892	1,604,676	97,721	5,859,117
1858 - - -	2,748,380	1,424,495	1,617,531	91,646	5,882,052
1859 - - -	2,652,780	1,437,111	1,636,432	136,282	5,862,605
1860 - - -	2,639,384	1,594,518	1,607,642	128,595	5,970,139
1861 - - -	2,624,957	1,546,206	1,571,416	147,957	5,890,536
1862 - - -	2,553,481	1,552,924	1,497,135	150,070	5,753,610
1863 - - -	2,409,898	1,566,638	1,477,852	214,099	5,662,487
1864 - - -	2,287,461	1,608,124	1,475,535	301,860	5,672,980
Increase *or Decrease* (*in italic figures*) per Cent. in 1864, as compared with 1847	*—30·9*	41·2	102·7	417·7	8·29

AN ACCOUNT of the Total Number of Horses, Cattle, Sheep, and Pigs in *Ireland*, in 1841, as ascertained by the Census Commissioners, and in each Year from 1849, as shown in the Agricultural Statistics, Ireland, together with the Total Value, calculated *according to the Rate assumed by the Census Commissioners of* 1841, viz., for Horses, 8 *l.* each; Cattle, 6 *l.* 10 *s.*; Sheep, 22 *s.*; and Pigs, 25 *s.*

YEAR.	NUMBER.				TOTAL Value.
	Horses.	Cattle.	Sheep.	Pigs.	
					£.
1841 - - -	543,751*	1,863,116	2,106,189	1,412,813	20,623,035
1849 - - -	525,924	2,771,139	1,777,111	795,463	25,168,946
1850 - - -	526,757	2,917,949	1,876,096	927,502	26,403,756
1851 - - -	521,706	2,967,461	2,122,128	1,084,857	27,152,555
1852 - - -	525,088	3,095,067	2,613,943	1,072,658	28,534,798
1853 - - -	539,785	3,383,309	3,142,656	1,444,945	31,592,890
1854 - - -	545,929	3,497,901	3,722,219	1,342,549	32,509,415
1855 - - -	556,287	3,564,400	3,602,342	1,177,605	33,053,478
1856 - - -	573,408	3,587,858	3,694,294	918,525	33,120,220
1857 - - -	599,782	3,620,954	3,452,252	1,235,186	33,700,916
1858 - - -	611,321	3,667,304	3,494,993	1,409,883	34,334,890
1859 - - -	629,075	3,815,598	3,592,804	1,265,751	35,368,259
1860 - - -	619,811	3,606,374	3,542,080	1,271,072	33,885,047
1861 - - -	614,232	3,471,688	3,556,050	1,102,042	32,769,035
1862 - - -	602,894	3,254,890	3,456,132	1,154,324	31,224,587
1863 - - -	579,978	3,144,231	3,308,204	1,067,458	30,050,671
1864 - - -	561,361	3,257,309	3,363,068	1,056,249	30,683,082
Increase *or Decrease* per Cent. in 1864, as compared with 1841	3·2	74·83	59·7	*—25·2*	49·

* Deducting the estimated number of 22,364 mules, being the number in 1849. The number of horses and mules together in 1841 was 576,115, the number of horses not being distinguished.

SUMMARY.

THE following is a RECAPITULATION of the proportionate Results shown in the preceding Accounts, and showing the relative proportions for *Great Britain* and *Ireland* respectively.

PROPORTIONS OF CONTRIBUTIONS UNDER ACT OF UNION.

Page 139. 1. That the relative proportions of the ability of *Great Britain* and *Ireland* to contribute to the Expenditure of the United Kingdom were assumed in 1800 to be as 15 to 2, or 88·235 to 11·765 per cent.

OF REVENUE AND EXPENDITURE 1801—1816.

2. That in the 16 years from 1801 to 1816 inclusive, the average annual amounts actually contributed by the two countries by taxation, subject to alteration of rates, were in the proportion of 93·31 to 6·69 per cent., and the average annual rate of increase in each country as compared with 1800, 71·8 and 62·6 per cent.

3. That the similar proportions of contributions, after deducting War Duties in Great Britain, were 90·5 to 9·5 per cent.

Page 140. 4. That during the same period, the average annual amounts of Total Revenue applicable to Expenditure were as 92·25 to 7·75 per cent.

5. That during the same period, the average annual amounts of Total Revenue applicable to Expenditure, as compared with the amount of such expenditure, were in the proportion of 71·6 and 49 per cent.

6. That in the year 1815, when the largest amount in any year was raised by both countries, the proportions of revenue, as compared with the expenditure, were 75 and 38·6 per cent.

7. That during the 16 years, the actual average annual increase of the produce of taxes subject to alteration of rates, as compared with the net estimated average annual gain from new or increased taxes, was, in Great Britain, 23 per cent. *in excess* of the estimated gain, whilst in Ireland it was 57 per cent. less than the estimate.

Page 142. 8. That during the same period, the total actual expenditure of each country was in the proportion of 89·07 and 10·93 per cent.

OF AMOUNTS RAISED BY LOAN.

Page 141. 9. That during the same period, the amounts of money raised by loan *for the service of* each country were in the proportion of 78·6, and 21·4 per cent.

10. That the amounts raised *in* each country for the service of the United Kingdom, were as 95·6 to 4·4 per cent.

11. That of such amount raised for the service of Ireland, there was raised in Great Britain 79·2, and in Ireland 20·8 per cent.

12. That the similar proportions of the net amount raised by creation of Debt were 81·9 to 18·1, 95·5 to 4·5, and 75·5 to 24·5 per cent. respectively.

OF GROSS RECEIPT OF REVENUE, AND ESTIMATED RECEIPT FROM EQUAL TAXES.

Page 143. 13. That in the 16 years from 1801 to 1816 inclusive, the average annual amounts of the gross receipts of Ordinary Revenue were as 92·15 to 7·85 per cent., whilst the estimated amounts from equal taxation are as 80·18 to 19·82 per cent.

Page 144. 14. That in the five years from 1817 to 1821, the similar proportions were 91·3 to 8·7 per cent., and 86·75 to 13·25 per cent. respectively.

15. That in the year 1845, the similar proportions were 91·6 to 8·4 and 88·68 to 11·32, and, adding the proportionate amounts of local taxation, so far as they can be ascertained (which were in the proportion of 88·24 to 11·76), 88·57 to 11·43 per cent. respectively.

16. That in the year 1863-4, the similar proportions were 90·49 to 9·51, 89·9 to 10·1, and (adding proportionate local taxation, in the proportion of 88·34 to 11·66) 89·6 to 10·4 per cent. respectively.

Of Taxes Remitted and Imposed, 1816 to 1864.

17. That for 1816 to 1864, the proportions of the amounts of taxes remitted were 93· to 7, of taxes imposed 87·76 to 12·24, and of the balance of taxes remitted, 98·64 to 1·36 per cent. Pages 145 and 146.

18. That the similar proportions, omitting the Income and Property Tax, were 93·1 to 6·9, 83·2 to 16·8, and 98·1 to 1·9 per cent. respectively.

Of Direct and Indirect Taxation, 1858–9 to 1863–4.

19. That the proportion per cent. of direct and indirect taxation were— Page 147.

	Col. 1. Total Direct and Indirect Taxation of Customs, Excise, Stamps, and Income and Property Tax, imposed equally on both Countries.	Col. 2. Indirect Taxation on Articles of General Consumption, included in Col. 1.	Col. 3. Other Indirect though partly Direct Taxation, included in Col 1.	Col. 4. Direct Taxation from Income and Property Tax, included in Col. 1.	Col. 5. Probate Duty and Legacy and Succession Duty, assumed to be other Direct Taxation, included in Col. 1.	Col. 6. Total Indirect Taxation, included in Col 1. (Totals of Cols. 2 and 3.)	Col. 7. Total Direct Taxation, included in Col. 1. (Total of Cols. 4 and 5.)
Average 1858–9, 1859–60, and 1860–1.	89·26 to 10·74	86·75 to 13·25	93·5 to 6·5 -	92·8 to 7·2 -	93·8 to 6·2 -	88·2 to 11·8 -	93· to 7·
Average 1861–2, 1862–3, and 1863–4.	89.5 to 10·5	87·28 to 12·72	92·6 to 7·4 -	93·3 to 6·7 -	94·2 to 5·8 -	88·3 to 11·7 -	93·5 to 6·5

20. That the similar proportions *of the total amount in each country* (Col. 1.) were— Page 141.

Average 1858–9, 1859–60, and 1860–1.	- -	59·9 and 75·9 -	18·3 and 10·6	15·8 and 10·2	6· and 3·3 -	78·2 and 86·5	21·8 and 13·5
Average 1861–2, 1862–3, and 1863–4.	- -	60·1 and 75· -	16· and 10·9	17·4 and 10·7	6·5 and 3·4 -	76·1 and 85·9	23·9 and 14·1

Of Exports and Imports.

20. That the average amounts of the official values of the Exports and Imports, in each of the three years ending 1802–3–4, were in the proportion of 85·9 to 14·1, and ending 1814–5–6, 88·2 to 11·8; the rates of increase in each country being 52 and 23 per cent. respectively. Page 153.

21. That the similar proportions of the real value of native produce exported, were 84·9 to 15·1, 81·7 to 18·3, and 11·7 and 40·3 per cent. respectively.

Of Number and Tonnage of Vessels.

22. That the proportions per cent. of the total number of vessels and tonnage (including their repeated voyages), which entered inwards and cleared outwards at the several ports, and of their relative increase, were as follows:

Period.	VESSELS.		TONNAGE.	
	Number.	Rate of Increase over 1802–3–4	Amount.	Rate of Increase over 1802–3–4.
Average 1802–3–4 -	68·28 to 31·72	- - -	74·93 to 25·07	—
,, 181 4–15–16 -	67·24 to 32·76	32·59 and 39·04	73·29 to 26·71	17·36 and 27·81
,, 1819–20–21 -	67·57 to 32·43	39·77 and 44·37	73·84 to 26·16	27·13 and 34·64
,, 1843–44–45 -	73·83 to 26·17	174·82 and 109·66	78·84 to 21·16	221·4 and 157·8
,, 1861–62–63 -	79·18 to 20·82	352·8 and 156·24	82·36 to 17·64	646·76 and 378·04

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App. No. 9.

Page 157.

23. That the similar proportions of the number and tonnage of vessels belonging to the different ports were, at the close of the following years—

Period.	VESSELS.		TONNAGE.	
	Number.	Rate of Increase over 1802-3-4.	Amount.	Rate of Increase over 1802-3-4.
Average 1802-3-4 -	94· to 6·	- - -	97· to 3·	—
„ 1814-15-16 -	94·5 to 5·5	22·5 and 11·6	97·5 to 2·5	11·6 and 6·73
„ 1819-20-21 -	93·83 to 6·17	21·85 and 25·4	97·1 to 2·9	25·4 and 20·16
„ 1843-44-45 -	91·2 to 8·8	29·3 and 95·6	93· to 7·	95·6 and 264·3
„ 1861-62-63 -	91·6 to 8·4	52·8 and 119·5	94·98 to 5·02	119·5 and 329·7

Of Property and Income Charged under the Income Tax Act.

Page 161.

24. That the proportions per cent. of the amounts of property charged under the different Schedules of the Income Tax, and of the total amount charged in the three years commencing from the period of the first imposition of the Income Tax in Ireland, and in the last years for which the accounts are made up, together with the increase *or decrease* per cent., were—

	Schedule A.	Schedule B.	Schedule C.	Schedule D.	Schedule E.	Total of Schedules A. B. and D.	Total of all the Schedules.
Proportion per cent. of average 1853-54 to 1855-56.	89·7 to 10·3	91·32 to 8·68	94·8 to 5·2	94·4 to 5·6	94·2 to 5·8	91·6 to 8·4	92· to 8·
Proportion per cent. of average 1861-62 to 1863-64.	90·4 to 9·6	91·6 to 8·4	96·2 to 3·8	95·3 to 4·7	94· to 6·	92·3 to 7·7	92·8 to 7·2
Increase *or decrease* per cent.	22· and 13·5	15·9 and 11·8	14·38 & *19·6**	23·8 and 2·3	31· and 35·4	21·8 and 10·6	21·6 and 9·7

* *Decrease.*

Of Population.

Page 162.

25. That the relative proportions per cent. of the population in each decennial period were as follows:—

Year.	Proportion per Cent.*	Decennial Rate of Increase.	Total Rate of Increase over 1801.
1801 - - - -	66·5 to 33·	—	—
1811 - - - -	66·45 to 33·1	14· and 14·2	14· and 14·2
1821 - - - -	67·16 to 32·41	17·7 and 14·2	34·2 and 30·4
1831 - - - -	67·39 to 32·18	15·4 and 14·2	54·9 and 48·9
1841 - - - -	69·07 to 30·47	14· and 5·2	76·5 and 56·7
1851 - - - -	75·61 to 23·87	12·3 (Increase.) and 19·6 (Decrease.)	98·2 and 26·
1861 - - - -	79·6 to 19·9	11·1 (Increase.) and 11·8 (Decrease.)	120·25 and 11·2

* The remaining proportion per cent. consisting of the population of islands in the British Seas.

26. That of the total number of British-born subjects in the United Kingdom in 1861, 99·694 per cent. resided in Great Britain and ·306 in Ireland, whilst of the total number of Irish-born subjects in the United Kingdom, 87·655 per cent. resided in Ireland, and 12·345 in Great Britain.

Of

App. No. 9.

Of Agricultural Statistics of Ireland.

27. That the increase or decrease per cent. of the number of acres under crops in Ireland in 1864, as compared with 1847, was as follows:— Page 163.

	Increase per Cent.	Decrease per Cent.
Cereals		30·9
Meadow and clover	41·2	
Green crops	102·7	
Flax	417·7	
Total crops of all kinds	8·29	

28. That the increase or decrease per cent. of the number of agricultural live stock from 1841 to 1864, and of their total value, was as follows:—

	Increase per Cent.	Decrease per Cent.
Horses	3·2	
Cattle	74·83	
Sheep	59·7	
Pigs		25·2
Their total value	49·	

Conclusion.

These statistical data, bearing upon the question of the relative ability of the two countries, are submitted to the Committee, without the expression of any opinion of the practical conclusions to which they may appear to lead, as to how far they may be satisfactory data for determining the relative ability of the two countries to contribute to the expenditure of the United Kingdom, and how far they may indicate circumstances demanding particular exemptions or abatements in Ireland, from taxation imposed upon Great Britain; an expression of opinion upon these important questions being more properly left to the better judgment of "The Select Committee appointed to consider the Taxation of Ireland, and how far it is in accordance with the provisions of the Treaty of Union, or just in reference to the resources of the country."

H. W. Chisholm,
Chief Clerk.

Exchequer, 3 May 1865.

Appendix, No. 10.

PAPER handed in by Mr. *Chisholm.*

App. No. 10.

I.—AN ACCOUNT of the Amount of RECEIPTS from, and PAYMENTS to, DEPOSITORS in SAVINGS BANKS in *Great Britain* and *Ireland* respectively, in each of the last Ten Years, up to the Period of the latest Return presented to Parliament; showing also the Total Amount owing to Depositors in Savings Banks in each Country at the close of each Year.

Note.—The amounts of receipts and payments are taken from the Statistical Abstract, 1864, p. 77; the amounts owing to depositors from the Annual Returns of Miscellaneous Statistics made up by the Board of Trade, and from the Annual Returns of Savings Banks made by the National Debt Office.

	GREAT BRITAIN.			IRELAND.		
	Received.*	Paid.	Owing to Depositors at the Close of the Year.	Received.*	Paid.	Owing to Depositors at the Close of the Year.
	£.	£.	£.	£.	£.	£.
In the year ending 20 Nov. 1854 -	6,885,269	7,406,609	31,478,349	514,872	549,738	1,579,490
„ 1855 -	6,739,329	7,169,646	32,148,343	448,882	484,487	1,616,126
„ 1856 -	7,234,609	7,579,550	32,662,278	506,844	444,033	1,710,180
„ 1857 -	7,068,946	7,867,862	32,966,458	512,469	507,233	1,775,915
„ 1858 -	7,400,810	7,334,317	33,986,443	501,115	505,586	1,818,423
„ 1859 -	8,444,498	6,892,741	36,558,288	577,409	442,608	2,005,810
„ 1860	8,881,009	7,741,561	38,666,405	597,576	516,860	2,143,285
„ 1861 -	8,213,476	9,021,042	38,934,230	551,394	600,497	2,153,211
„ 1862 -	7,636,788	9,575,894	38,013,656	499,842	619,735	2,088,370
„ 1863 -	7,750,954	8,338,943	38,407,264	497,748	567,699	2,071,523

* The amounts stated as received do not appear to include interest accrued on deposits, and calculated up to the 20th November in each year, when the several amounts of interest are credited to the depositors, thus increasing the total amount owing to them.

II.—AN ACCOUNT of the Amount Received from and Paid to DEPOSITORS in the POST OFFICE SAVINGS BANKS in *Great Britain* and *Ireland* respectively, in each Year since the passing of the Act 24 Vict. c. 14; and from the commencement of Business on 16 September 1861; showing also the Total Amount owing to Depositors in each Country at the close of each Year.

(From the Annual Statistical Abstracts.)

	GREAT BRITAIN.			IRELAND.		
	Received (including Interest).	Paid.	Owing to Depositors at the Close of the Year.	Received (including Interest).	Paid.	Owing to Depositors at the Close of the Year.
	£.	£.	£.	£.	£.	£.
From 16 Sept. 1861 to 31 Dec. 1862 -	2,038,793	420,119	1,618,674	97,887	18,259	79,628
In the year 1863 -	2,587,070	974,850	3,230,894	117,663	51,357	145,934
„ 1864 -	3,331,307	1,750,561	4,811,640	121,044	85,494	181,484

III. —AN ACCOUNT of the GROSS RECEIPTS of RAILWAYS in *Great Britain* and *Ireland*, in the last Year for which the Amount has been returned to Parliament. App. No. 10.

(Return, No. 20 of 1864, page 57.)

	GREAT BRITAIN.	IRELAND.
	£.	£.
In the year ended 31 December 1863 - - - - -	29,557,511	1,518,654

IV.—AN ACCOUNT of the Amount of INTEREST Paid upon GOVERNMENT STOCK in *Great Britain* and *Ireland* respectively, in the Year ended 31 March 1864.

(Finance Accounts, 1864, page 38.)

	GREAT BRITAIN.	IRELAND.
	£.	£.
In the year ended 31 March 1864	21,612,527	1,120,134

V.—AN ACCOUNT of the Amount of POST OFFICE MONEY ORDERS issued in *Great Britain* and *Ireland* respectively, in each of the Ten Years from 1854 to 1863, inclusive.

(From the Annual Reports of the Postmaster General.)

	GREAT BRITAIN.	IRELAND.
	£.	£.
In the year 1854 - - -	9,771,601	690,809
„ 1855 - - -	10,255,719	753,560
„ 1856 - - -	10,998,619	806,942
„ 1857 - - -	11,361,736	818,537
„ 1858 - - -	11,804,547	857,558
„ 1859 - - -	12,359,255	891,675
„ 1860 - - -	12,913,227	945,177
„ 1861 - - -	13,623,222	993,125
„ 1862 - - -	14,691,301	1,069,958
„ 1863 - - -	15,393,754	1,100,039

Exchequer, 29 May 1865.

H. W. Chisholm, Chief Clerk.

Appendix, No. 11.

App. No. 11.

PAPER handed in by Mr. *Chisholm*, 1 June 1865.

AN ABSTRACT of the RECEIPTS and ISSUES of the TREASURY in *Ireland*, in the NINE (In Irish Currency). [To complete the Series of

		£.	s.	d.	£.	s.	d.	£.	s.	d.
REMAINS on 25th March 1800	APPROPRIATED FUNDS:									
	Loan	421,332	–	8¾						
	Linen	1,131	15	1						
	Improving Dublin	2,012	11	5½						
	Lagan Navigation	324	10	–						
	King's Inns	2,730	–	–						
	Voluntary Contributions	21,367	1	–½						
					448,897	18	3¾			
	CONSOLIDATED FUND				535,785	16	4¾			
								984,683	14	8½
CONSOLIDATED FUND:	RECEIPTS:									
	Revenue				1,674,980	17	8¼			
	Quit Rent, Casualties, Ware Licenses, Wrought Plate, Public Coal Yards, &c.				19,694	7	1½			
	Stamps				109,886	18	11½			
	Postage				18,711	19	8			
	Four Shilling Tax on Salaries and Pensions				14,141	4	4			
	Poundage and Pell's Fees				35,104	19	6¾			
	Forfeiture paid by Luke White				75,000	–	–			
	On First Lottery of 1800, in full of the Subscription				214,250	–	–			
	On Second Lottery of 1800 – – ditto				214,250	–	–			
	On Treasury Bills at 5*l.* per Cent. per Annum, from 24th July 1800; part of the Supplies provided for Session 1800				600,000	–	–			
	On Treasury Bills at 5*l.* per Cent. per Annum, from 24th July 1800; part of the Supplies provided for Session 1800				100,000	–	–			
	On Debentures at 5*l.* per Cent. per Annum, from 25th March 1800, part of a loan of 2,500,000*l.*, to which is attached a Premium in Treasury Bills at 15*l.* 9*s.* per Cent., amounting to 386,250*l.*, bearing an Interest at 5*l.* per Cent. per Annum from 25th December 1799. (Part of the Supplies granted, Session 1800)				2,100,000	–	–			
	From the Government of Great Britain, part of a loan of 2,000,000*l.* British, by which a Debt is created of 3,140,000*l.* British, making 3,401,666*l.* 13*s.* 4*d.* Irish, at 3*l.* per Cent. per Annum from Sundry Dates				1,487,123	1	5½			
								6,663,143	8	9½
APPROPRIATED FUNDS:	Linen Manufacture				1,316	3	2			
	Lagan Navigation				800	–	–			
	Improving Dublin				8,444	10	2			
	King's Inns				860	–	–			
	Voluntary Contributions				12	10	–			
	Royal Exchange				390	–	–			
								11,823	3	4
							£.	7,659,650	6	10

Exchequer, 1 June 1865.

Appendix, No. 11.

PAPER handed in by Mr. *Chisholm*, 1 June 1865.

App. No. 11.

MONTHS, from the 25th March 1800 to the 5th January 1801, so far as the same can be made up. Appendix, No. 20, 1864, p. 426-7.] (In Irish Currency.)

		£. s. d.	£. s. d.
CONSOLIDATED FUND:	ISSUES:		
	CIVIL LIST	- - -	107,651 3 7½
	PENSIONS	- - -	75,348 19 6
	MILITARY PURPOSES:		
	Army	1,083,775 14 1½	
	Additional Pay for Dublin Duty	6,469 17 8¾	
	General Officers	32,620 5 8½	
	Muster-Master General, &c.	4,243 9 11	
	Garrisons	4,324 19 8¼	
	Recruiting, &c.	3,888 13 4	
	Half-Pay Officers	8,161 1 4½	
	Widows of Officers	2,179 8 3¼	
	Extra Expenses of Forage	123,927 – –	
	Ordnance	180,000 – –	
	Barracks	340,000 – –	
	Royal Hospital	18,925 3 –	
	Royal Infirmary	1,913 8 1¾	
	Militia	504,009 8 9	
	District Corps	261,982 8 –½	
	Commissariat Establishment	94,179 17 9¾	
	Medical Board	6,422 – 8½	
	Military Hospitals and Medicaments	13,048 3 5½	
	Bat and Forage	47,836 19 –	
	Reduced Chaplains	2,281 9 1½	
			2,740,189 8 2¼
	VOTE OF CREDIT	- - -	212,251 8 3½
	PERMANENT GRANTS:		
	Public Infirmaries	2,300 – –	
	Public Coalyards	996 10 4	
	Army Baggage	24,991 11 4¾	
	Police	12,048 11 6¼	
	Inspector General of Prisons	200 – –	
	Inland Navigations	100 – –	
	Transportation of Felons	3,380 6 10¼	
	Fees on Auditing Treasury Accounts	1,754 12 9	
	Imprest Office	1,715 9 3¼	
	Secret Service in detecting Treasonable Conspiracies	7,216 9 10½	
	Annuities and Compensation Allowances	17,980 18 4	
	Judges' Additional Salaries	16,099 2 9	
	ANNUAL GRANTS:		88,783 13 1
	Officers of the House of Commons	10,478 1 4	
	Public Officers for several Services	3,260 – –	
	Public Hospitals and Schools	36,735 4 3¾	
	Miscellaneous Services	141,210 4 5	
	Linen and Hempen Manufactures	16,200 – –	
	Board of First Fruits	5,000 – –	
	Dublin Society	15,500 – –	
	Corporation for Paving and Lighting Dublin	10,000 – –	
	Commissioners of Wide Streets	4,500 – –	
			242,883 10 –¼
	Prizage	- - -	4,123 14 2¾
	Manning the Fleet	- - -	8,247 8 5¼
	Relief of Loyalists	- - -	217,811 – 5
	Compensation for Losses by the Union Expenses of the Board	- - -	1,318 17 2¾
	Inland Navigations, Grant of 1,800 *l.*	- - -	2,785 7 9
	Lottery Prizes and Expenses (Prizes 298,906 *l.*, Expenses 5,699 *l.* 4 *s.* 9½ *d.*)	- - -	304,605 4 9½
	Principal of Exchequer Bills	- - -	701,300 – –
	Discount on prompt Payment of Loan Deposits	- - -	14,577 15 4¾
	Interest on Government Stock	492,400 1 7	
	Ditto Debentures	348,193 15 8	
	Ditto Treasury Bills	47,366 3 6	
	Life Annuities	25,123 4 11½	
	Bank Annuity	36,562 10 –	
	Long Annuity	10,726 19 4	
	Short Annuities	45,359 17 8	
	Sinking Fund	221,003 19 8	
			1,226,736 12 4½
APPROPRIATED FUNDS:			5,948,614 3 4½
	Improving Dublin	9,337 19 1½	
	King's Inns	2,730 – –	
	Voluntary Contributions	1,279 9 7	
	Royal Exchange, &c.	390 – –	
			13,737 8 8½
REMAINS on 25th Dec. 1800	APPROPRIATED FUNDS:		5,962,351 12 1
	Linen	£. 2,447 18 3	
	Lagan Navigation	1,124 10 –	
	Improving Dublin	1,119 2 6	25,651 12 2½
	King's Inns	860 – –	
	Voluntary Contributions	20,100 1 5½	
	CONSOLIDATED FUND		1,671,647 2 6½
			1,697,298 14 9
		£.	7,659,650 6 10

H. W. Chisholm, Chief Clerk.

Appendix, No. 12.

(Reprinted from Return, No. 452, of Session 1863.)

App. No. 12.

ACCOUNT, showing the POPULATION, the Gross Receipt of the REVENUE (after deducting Repayments, Allowances, Discounts, Drawbacks, and Bounties of the nature of Drawbacks, and excluding therefrom Miscellaneous Receipts), and the Rate per Head of the Population of such Revenue; also the Amount of PROPERTY and PROFITS assessed for the INCOME TAX, the Amount of Income per Head of the Population, and the Poundage of said Taxation on such Income, for *Great Britain*, in the Year ending the 31st day of March 1862:

And, similar ACCOUNT for *Ireland*, for the same Year.

	GREAT BRITAIN.	IRELAND.
Population	23,128,518	5,798,967
Gross Revenue	£. 61,360,749	£. 6,792,606
Amount of Gross Revenue per Head of Population	£. 2 13 *s.*	£. 1 3 *s.* 5 *d.*
Amount of Property and Profits assessed to Income Tax	£. 301,380,730	£. 21,638,975
Amount of Income per Head of Population	£. 13 0 *s.* 7¼ *d.*	£. 3 14 *s.* 7¼ *d.*
Amount of Revenue for each £. of Income	4 *s.* 0¾ *d.*	6 *s.* 3¼ *d.*

Note.—"Population," "Gross Revenue," and "Amount of Gross Revenue per Head of Population," taken from Parliamentary Paper 356, of Session 1863.

Inland Revenue Office,
10 July 1863.

Fred. Gripper,
Chief Accountant.

Appendix, No. 13.

(Reprinted from Return, No. 569, of Session 1864.)

ACCOUNT of the BALANCE arising from the REMITTANCE of PUBLIC MONEY to and from the IRISH and BRITISH EXCHEQUERS, from 1834 to 1863, both inclusive (in continuation of Parliamentary Paper, No. 659, of Session 1833).

	In the Year ended 5 January.	Remitted from the British Exchequer to the Irish. Amount. £. s. d.	On what Account Remitted.	Remitted from the Irish Exchequer to the British. Amount. £. s. d.	On what Account Remitted.
	1796	300,000 – –	Towards paying Public Services in Ireland.	—	
	1798	57,179 11 11	- ,, ,,	—	
	1799	78,454 9 8	- ,, ,,	—	
	1800	399,779 1 10	- ,, ,, - -	131,634 1 7	Repayments to Great Britain.
	1801	- - -	- ,, ,, - -	403,779 1 10	- ,, ,,
	1803	276,000 – –	- ,, ,,	—	
		185,000 – –	One-third of Lottery Profits -		
	1804	117,444 8 11	- ,, ,,	—	
	1805	39,000 – –	- ,, ,,	—	
	1806	165,354 3 3	- ,, ,,	—	
	1807	178,062 10 –	- ,, ,, - -	276,000 – –	- ,, ,,
		117,647 – –	2-17ths of 1,000,000 *l.* out of Spanish Prize Money.		
	1808	207,604 3 4	One-third of Lottery Profits	—	
	1809	114,166 13 4	- ,, ,,	—	
	1810	146,527 15 6	- ,, ,,	—	
As per Return No. 659, of Session 1833.	1811	174,416 13 3	- ,, ,, - -	1,270,000 – –	
	1812	104,250 – –	- ,, ,, - -	1,465,000 – –	
	1813	116,500 – –	- ,, ,, - -	1,656,276 – –	Ditto - On account of balance on Joint Expenditure Account due to Great Britain.
	1814	122,416 13 4	- ,, ,, - -	2,603,455 – –	
	1815	117,194 8 9	- ,, ,, - -	2,466,545 – –	
	1816	98,249 19 11	- ,, ,, - -	6,107,986 12 3	
	1817	166,722 4 5	- ,, ,, - -	1,184,009 8 5	
	1818	216,923 1 6	Towards paying Public Services of the United Kingdom in Ireland.	25,768 4 2	Ditto, in part of £. 117,228. 0. 10. ditto.
	1821	1,300,000 – –	- ,, ,,	—	
	1823	1,605,181 9 5	- ,, ,,	—	
	1824	877,200 – –	- ,, ,,	—	
	1825	100,000 – –	- ,, ,,	—	
	1826	470,000 – –	- ,, ,,	—	
	1827	400,000 – –	- ,, ,,	—	
	1831	- - -	- - - - - -	750,000 – –	Towards paying Public Services of the United Kingdom in Great Britain.
	1832	- - -	- - - - - -	700,000 – –	- ,, ,,
	1833	- - -	- - - - - -	600,000 – –	- ,, ,,
	1834	- - -	- - - - - -	400,000 – –	- ,, ,,
	1835	- - -	- - - - - -	550,000 – –	- ,, ,,
	1836	- - -	- - - - - -	1,200,000 – –	- ,, ,,
As per Return No. 305, of Session 1842.	1837	- - -	- - - - - -	1,300,000 – –	- ,, ,,
	1838	- - -	- - - - - -	1,000,000 – –	- ,, ,,
	1839	- - -	- - - - - -	375,000 – –	- ,, ,,
	1840	- - -	- - - - - -	730,000 – –	- ,, ,,
	1841	- - -	- - - - - -	380,000 – –	- ,, ,,
	1842	80,000 – –	Towards paying Public Services of the United Kingdom in Ireland.	420,000 – –	- ,, ,,
As per Return No. 652, of 1845.	1843	100,000 – –	- - - - - -	540,000 – –	- ,, ,,
	1844	- - -	- - - - - -	250,000 – –	- ,, ,,
Per No. 718, of 1847 -	1846	- - -	- - - - - -	550,000 – –	- ,, ,,
Per No. 461, of 1854	1853	- - -	- - - - - -	200,000 – –	- ,, ,,
	1854	- - -	- - - - - -	1,100,000 – –	- ,, ,,
	1855	- - -	- - - - - -	700,000 – –	- ,, ,,
	£.	8,431,274 8 4	£.	29,335,453 8 3	
		Deduct Remittances from British Exchequer - - - £.		8,431,274 8 4	
		Balance of Remittances from Irish to British Exchequer - £.		20,904,178 19 11	

App. No. 13.

Explanatory Note.

This Account is made out in the same form, and shows the same amounts up to the year 1854, as the former Returns therein referred to. But those Returns do not show upon what account such amounts were remitted; they state only that all sums remitted from the British to the Irish Exchequer, on account of Loans raised in Great Britain for Ireland, are excluded from the Returns. This information is now added, the account being made up for the whole period from 1796.

But although there would thus appear to be a balance of remittances from the Irish to the British Exchequer of 20,904,178 *l.* 19 *s.* 11 *d.*, yet it is shown that by far the largest portion of this amount consists of repayments to the British Exchequer of advances made to the Irish Exchequer, those advances by Great Britain for the joint expenditure not being shown on the other side of the account, as not having been amounts remitted to Ireland, but applied to expenditure for which Ireland was liable.

It would also appear that, after deducting the final repayment in 1817, there has been remitted from the British to the Irish Exchequer, since the consolidation of the British and Irish Treasuries on 5 January 1817, a total amount of 5,149,304 *l.* 10 *s.* 11 *d.*, and from the Irish to the British Exchequer 11,745,000 *l.*, showing a balance of 6,595,695 *l.* 9 *s.* 1 *d.* thus remitted from Ireland to Great Britain.

It is, however, to be observed that since the consolidation of the Public Revenues of Great Britain and Ireland on 5 January 1817, under the Act 56 Geo. 3, c. 98, such revenues have been applied indiscriminately to the service of the United Kingdom, in pursuance of such Act, without any distinction as to the separate service of either Great Britain or Ireland; the only distinction observed being whether such services were paid in Great Britain or in Ireland. For instance, at 5 January 1817, the annual charge of that portion of the Irish Debt which was payable in Great Britain, amounted to 4,703,545 *l.* 16 *s.* 10 *d.*, and from that period the whole amount of this charge, being thenceforward a portion of the charge for the United Kingdom, was practically defrayed, year by year, out of the Revenues of Great Britain, and appears in the public accounts as a portion of the public expenditure of the United Kingdom in Great Britain. The whole amount of Navy Services for the United Kingdom has also been defrayed out of the revenue of Great Britain since 5 January 1817. And all Army expenditure in Ireland, defrayed through the medium of Bills of Exchange drawn on the Paymaster General in England, has been actually met by Issues from the British Exchequer.

In point of fact, the amounts which appear in the foregoing Return to have been remitted from Great Britain to Ireland, in the several years from 5 January 1817, show only the sums required for such portion of the public expenditure of the United Kingdom as was defrayed in Ireland, beyond the amount of revenue raised in Ireland, and beyond the amount of Army expenditure provided for by Bills drawn on the Paymaster-General; whilst the amounts remitted from Ireland to Great Britain show only the sums which were not required for such expenditure in Ireland, and were remitted to the British Exchequer for similar expenditure in Great Britain.

Such amounts were remitted in pursuance of Sect. 11 of the Act 56 Geo. 3, c. 98, which provided that the Treasury might direct the issue of any part of the Quarterly Surplus of Consolidated Fund in either Exchequer, for the purpose of remittance to the other, as the exigencies of the Public Service of the United Kingdom might appear to them to require.

Exchequer, 29 July 1864. *H. W. Chisholm*, Chief Clerk.

Appendix, No. 14.

(Reprinted from Return, No. 106, of Session 1865.)

ACCOUNTS, showing the REVENUE actually Collected in *Ireland* during each Year, from the 25th day of March 1790 to the 1st day of January 1801, and in each Year to the 5th day of January 1817; deducting from the Gross Collection only Drawbacks and Repayments, and setting forth in Distinct Columns the Charges of Collection; the Local Public Expenditure of Ireland, exclusive of Advances for Public Objects; the Interest and Charges of Debt from borrowing in Ireland; the Interest and Charges of Debt from borrowing in England for Ireland; the Amount of Revenue exceeding the foregoing Charges which remained applicable to National Expenditure; the Amount to which the Revenue fell short of the said Charges.

PERIOD.	Col. 1. Gross Revenue of Ireland actually Collected during the Year, deducting only Drawbacks and Repayments. (*See* Note*.)	Col. 2. Charges of Collection of Revenue (being two-seventeenths of the Joint Expenditure of the United Kingdom under this Head, from 1801 to 1816 inclusive).	Col. 3. Public Expenditure of Ireland, other than for Collection of Revenue and Charges of Debt, and exclusive of Advances for Public Objects, but including Expenditure for National Objects, out of Gross Revenue.	Col. 4. Actual Expenditure for Interest and other Charges of Debt from borrowing in Ireland, including Charges of receiving Loans and Discounts for Prompt Payment.	Col. 5. Actual Expenditure for Interest and other Charges of Debt from borrowing in England for Ireland, under Acts of the British and Imperial Parliament, including Charges of receiving Loans, and Discount for Prompt Payment.	Col. 6. TOTAL Public Expenditure of Ireland; viz. Amount of Cols. 2, 3, 4, and 5 (including two-seventeenths of the Joint Expenditure of the United Kingdom from 1801 to 1816 inclusive).	Col. 7. Excess of Revenue (Col. 1) over Expenditure (Col. 6).	Col. 8. Deficiency of Revenue (Col. 1) to meet Expenditure (Col. 6).
	£.	£.	£.	£.	£.	£.	£.	£.
Year ending 25 March 1791	1,727,929	262,608	1,416,269	129,327	- - -	1,808,204	–	80,275
,, 1792	1,857,656	286,120	1,448,403	133,173	- - -	1,867,696	–	10,040
,, 1793	1,812,001	269,433	1,405,333	132,587	- - -	1,807,353	4,648	—
,, 1794	1,643,202	266,559	1,601,685	146,507	- - -	2,014,751	–	371,549
,, 1795	2,012,082	275,864	1,655,347	213,805	- - -	2,145,016	–	132,934
,, 1796	2,521,138†	262,715	2,728,434	244,978	- - -	3,236,127	–	706,989
,, 1797	2,083,765	279,620	2,835,643	408,286	- - -	3,523,549	–	1,439,784
,, 1798	2,450,121	278,486	4,237,844	504,754	118,031	5,139,115	–	2,688,994
,, 1799	2,737,815‡	271,826	4,818,701	475,483	288,278	5,854,288	–	3,116,473
,, 1800	3,436,078‡	309,745	5,688,488	779,778	453,082	7,231,093	–	3,795,015
Nine months to 5 Jan. 1801	2,540,888	256,084	3,751,153	625,678	520,151	5,153,066	–	2,612,178
Year ending 5 Jan. 1802	3,093,682	279,615	4,810,889	1,189,758	803,800	7,084,062	–	3,990,380
,, 1803	3,856,422	277,824	4,525,227	985,379	890,281	6,678,710	–	2,822,288
,, 1804	3,430,591	277,898	3,573,080	1,010,951	983,274	5,845,203	–	2,414,612
,, 1805	3,662,532	299,968	4,670,706	1,158,773	1,275,179	7,404,626	–	3,742,094
,, 1806	3,921,827	313,687	5,274,182	1,086,393	1,591,362	8,265,624	–	4,343,797
,, 1807	4,491,989	328,992	5,510,061	1,215,438	1,751,663	8,806,154	–	4,314,165
,, 1808	5,065,581	374,946	5,226,670	1,153,748	1,967,678	8,723,042	–	3,657,461
,, 1809	5,017,027	401,590	6,030,234	1,190,158	2,088,145	9,710,127	–	4,693,100
,, 1810	5,025,651	425,161	6,115,348	1,366,593	2,260,436	10,167,538	–	5,141,887
,, 1811	4,606,820	440,574	6,284,970	1,353,623	2,448,471	10,527,638	–	5,920,818
,, 1812	5,100,990	461,832	6,996,630	1,413,286	2,754,754	11,626,502	–	6,525,512
,, 1813	5,660,930	482,291	7,523,401	1,611,417	2,793,313	12,410,422	–	6,749,492
,, 1814	5,946,836	509,822	9,007,624	1,670,639	3,198,475	14,386,560	–	8,439,724
,, 1815	6,323,995	525,662	9,314,069	1,902,866	3,534,255	15,276,852	–	8,952,857
,, 1816	6,593,213	543,919	7,432,648	1,932,450	3,981,783	13,890,800	–	7,297,587
,, 1817	5,521,689	550,271	4,202,110	1,907,538	4,558,558	11,218,477	–	5,696,788

	Separate.	Joint.	TOTAL.
	£.	£.	£.
Year ending 5 Jan. 1802	1,385,350	3,425,539	4,810,889
,, 1803	1,183,928	3,341,299	4,525,227
,, 1804	407,402	3,165,678	3,573,080
,, 1805	50,425	4,620,281	4,670,706
,, 1806	10,418	5,263,764	5,274,182
,, 1807	361,855	5,148,206	5,510,061
,, 1808	42,129	5,184,541	5,226,670
,, 1809	30,829	5,999,405	6,030,234
,, 1810	10,990	6,104,358	6,115,348
,, 1811	29,829	6,255,141	6,284,970
,, 1812	77,777	6,918,853	6,996,630
,, 1813	88,225	7,435,176	7,523,401
,, 1814	53,424	8,954,200	9,007,624
,, 1815	89,973	9,224,096	9,314,069
,, 1816	52,496	7,380,152	7,432,648
,, 1817	64,061	4,138,049	4,202,110

* In the Gross Revenue of Ireland, for the several years up to 5th January 1802, as stated above, being the amounts shown in the Finance Accounts, the *Gross Lottery Receipts* are included, the amount paid for prizes being included in the Expenditure. In the subsequent years the *Net Profits* of the Lottery only are included in the Gross Receipts, being the proportion of the Net Profits of the Lotteries in Great Britain which were remitted to Ireland under the provisions of the several Lottery Acts.

† This sum of 2,529,138*l.* includes 300,000*l.* received from Great Britain "towards paying certain sums expended by Ireland on account of Public Services."

‡ Includes Receipt from Voluntary Contributions, under the head of Appropriated Funds.

App. No. 14.

Note.

This Return is prepared, as far as possible, in the terms of the Order. The several amounts are taken from the Finance Accounts rendered to Parliament in Irish currency, and are here converted into British currency.

Following former precedents, certain small appropriated funds for local purposes are excluded both from the Public Revenue and the Public Expenditure of Ireland.

It is impossible to state in Column 3, the amount of the *Local Public Expenditure* of Ireland, if the terms of the Order be understood to require the amount *actually expended in Ireland*, as many of the heads of expenditure, especially of Army Expenditure, comprise indiscriminately sums actually expended not only in Ireland, but in England and abroad. For the same reason it is also impossible to distinguish the *Local Expenditure for Ireland* from the National Expenditure. The terms of the Order can only be complied with, and appear to be best met by stating in Column 3, "the amount of the Total Public "Expenditure of Ireland, other than for collection of Revenue and charges of Debt, "exclusive of advances for public objects, but including expenditure for National Objects, "out of Gross Revenue."

In obedience to the terms of the Order, requiring the Public Expenditure to be stated *exclusive of advances for public objects*, the amounts of the Public Expenditure of Ireland, from 1801 to 1816 inclusive, in Columns 2 and 3, are shown, not as actually defrayed in each year, but as subsequently settled, under the terms of the Act of Union, by stating two-seventeenths of the joint expenditure of the United Kingdom; the amount of joint expenditure actually defrayed in Ireland in the several years from 1801 to 1807 inclusive, in excess of her proportion (as shown at page 6 of the Return, No. 474, of Session 1864), being in fact advances repayable by Great Britain. The several amounts of the separate and joint expenditure of Ireland, from 1801 to 1816, the totals of which are shown in Column 3, are stated in distinct columns, at the foot of Column 3.

Another Column (6) is added to *those stated in the Order*, showing the total of Columns 2, 3, 4, and 5. The total Public Expenditure shown in this column will thus agree with the sum of the several amounts in Columns 4, 6, and 7, at page 3 of the Return, No. 474 of Session 1864.

It should be observed, that in obedience to the terms of the Order, the amount of *Gross Revenue actually collected during* each year, as it is shown in the Finance Accounts rendered to Parliament, is stated in Column 1, whilst the *Deficiency of such Revenue* to meet the Expenditure is shown in Column 8. But such amount of Revenue is not actually applicable to the Expenditure of the year, as it excludes the arrears and balances collected in former years, and paid into the Exchequer during the year, and so applied; and it includes balances and bills in the hands of collectors and receivers, as well as certain arrears of Revenue, charged to the collectors but not acually collected, at the end of the year, portions of which balances and arrears were paid into the Exchequer, and made available for the expenditure of the following year. Such amount of Revenue will therefore necessarily differ from the amount of Revenue for the same year, actually applicable to the expenditure of the year, as stated in other Revenue Accounts.

The following amounts of advances for public objects, and of repayments on account of such advances, are *not* deducted from the amounts of Expenditure, as shown in Column 3, and of Gross revenue, in Column 1, for the several years; such amounts of advances having been included in the Joint Expenditure of Ireland, and 15-17ths having been charged against Great Britain, by the several Committees of 1811, 1812, 1813, and 1815. These several amounts of advances and of repayments are shown in British currency in the Income and Expenditure Accounts of Ireland, appended to the Report on Irish Poor, in 1830; and they are also specified in detail, in Irish currency, in the Balance Sheets appended to the Report of the Irish Taxation Committee, in 1864, pp. 444–459; viz.

	Advances.	Repayments.
	£.	£.
In the year ending 5 January 1810 - -	22,673	—
,, ,, 1811 - -	55,339	—
,, ,, 1812 - -	85,969	13,273
,, ,, 1813 - -	76,483	20,175
,, ,, 1814 - -	53,351	36,768
,, ,, 1815 - -	80,542	64,766
,, ,, 1816 - -	51,580	51,614
,, ,, 1817 - -	69,959	58,087

Exchequer, 1 March 1865. *H. W. Chisholm*, Chief Clerk.

Appendix, No. 15.

(Reprinted from Return, No. 110–I., of Session 1865.)

REVENUE, EXPENDITURE, &c.

I.—ACCOUNT of the REVENUE, EXPENDITURE, and DEBT of *Great Britain* and *Ireland*, in each of the Years 1797, 1798, 1799, 1800, and 1801, and at the Time immediately preceding the Union, and the relative Proportion of each in each Year:

II.—ACCOUNT of the REVENUE, EXPENDITURE, and LOANS raised in *Great Britain* and *Ireland*, from the Years 1802 to 1816, both inclusive:

III.—SIMILAR ACCOUNT in the Years from the Year 1816, or when the Exchequers were Consolidated, to the Year 1821–22, or when separate Accounts were kept for each Country:

IV.—SIMILAR ACCOUNT up to the present Time.

Treasury Chambers,
31 March 1865.

F. PEEL.

I.—ACCOUNT of the REVENUE, EXPENDITURE, and DEBT of *Great Britain* and *Ireland*, in each of the Years 1797, 1798, 1799, 1800, and 1801, and at the Time immediately preceding the Union, and the relative Proportion of each in each Year.

	GREAT BRITAIN.			IRELAND. (*In British Currency.*)				Relative Proportion of Great Britain to Ireland, in Seventeenths.		
PERIOD.	Col. 1. Gross Revenue applicable to Public Expenditure, deducting only Drawbacks and Repayments from Gross Revenue, and Repayments of Advances from Net Revenue.	Col. 2. Total Public Expenditure, including Collection of Revenue, and Payments for National Objects out of Gross Revenue, excluding Advances for Public Objects.	Col. 3. Annual Charge for Interest, Sinking Fund, and Management of Funded and Unfunded Debt, as Estimated at the End of each Period.	In the Year ending 25th March	Col. 4. Gross Revenue applicable to Public Expenditure, deducting only Drawbacks and Repayments from Gross Revenue, and Repayments of Advances from Net Revenue, *see* Note (*a*).	Col. 5. Total Public Expenditure, including Collection of Revenue, and Payments for National Objects, out of Gross Revenue, excluding Advances for Public Objects, *see* Note (*a*).	Col. 6. Annual Charge for Interest, Sinking Fund, and Management of Funded and Unfunded Debt, as Estimated at the End of each Period.	Of Revenue, as stated in Columns 1 and 4.	Of Expenditure, as stated in Columns 2 and 5.	Of Debt, as stated in Columns 3 and 6.
Year ending—	£. s. d.	£. s. d.	£.		£. s. d.	£. s. d.	£.			
5 Jan. 1798	23,550,805 18 11	52,140,748 2 4	18,867,620	1798	2,301,954 15 8	4,955,699 9 6	658,189	15·5 : 1·5	15·5 : 1·5	16·4 : ·6
„ 1799	30,458,997 3 –	49,606,229 1 10	20,401,365	1799	2,211,034 17 10	5,579,356 16 9	941,616	15·8 : 1·2	15·3 : 1·7	16·2 : ·8
„ 1800	31,979,727 15 7	55,912,617 5 11	21,048,032	1800	3,159,214 10 6	6,956,651 9 8	1,289,148	15·6 : 1·4	15·1 : 1·9	16· : 1·
„ 1801	33,822,038 18 2	50,177,160 4 11	22,161,754	¾ of a year to 5 Jan. 1801	1,917,347 17 6	4,877,153 – 8	1,572,351	15·8 : 1·2*	15·3 : 1·7*	15·9 : 1·1

* Annual Amount for Ireland calculated in proportion to Three-quarterly Amount.

(*a*) The Net Lottery Receipt, after deducting Prizes, is included in the Gross Revenue of Ireland, and the Amount paid for Prizes is excluded from the Public Expenditure of Ireland, in order to show a just comparison with the Gross Revenue and Expenditure of Great Britain, from which Lottery Prizes are excluded in the Finance Accounts

II.—ACCOUNT of the Revenue, Expenditure, and Loans raised in *Great Britain* and *Ireland* respectively, from the Years 1802 to 1816, both inclusive.

Note.—In the Total Public Expenditure of the Two Countries (Col. 1), the Repayments from Ireland to Great Britain in the several years, on account of the Balance due for the proportion of Contributions to joint Expenditure are excluded. The several Amounts of separate and of joint Expenditure of the Two Countries are shown at page 5 of the Return No. 474, of Session 1864, and at page 393 of the Appendix to the Report of the Irish Taxation Committee, 1864. The Amounts of Advances for Public Objects are deducted in this Return from such Total Expenditure.

The Annual Charge of the Pre-Union Debt of each Country is shown in detail at pages 396 and 397 of the Appendix to the same Report, and its amount is deducted in Col. 1, both of this and the two following Returns, in order to show the Balance of Deficiency or Surplus, as compared with Cols. 2 and 5, according to the terms of the Order. But it should be observed, that, in point of fact, not only was the Charge of the Pre-Union Debt of the Two Countries diminished from time to time by the falling in of Annuities, and by the cessation of the Charge for Sinking Fund, as well as of a portion of the Charge for Management, but also more especially by the paying off and discharging of Principal of Pre-Union Debt, both Funded and Unfunded.

The several Amounts of Gross Revenue of Great Britain (Col. 2), and of Ireland (Col. 5), from which the Charge of the Pre-Union Debt is deducted, as here stated, are shown more in detail at page 4 of the Return No. 474, of Session 1864, and at page 392 of the Appendix to the Report of the Irish Taxation Committee, 1864, with the exception of the Amounts of Repayments of Advances for Public Objects, which are excluded from this Return.

In the Amounts raised by Loans charged to Great Britain and Ireland respectively, as stated in Cols. 4 and 7, the Loan of 4,500,000 *l.*, raised in Great Britain for Ireland in 1811, is charged to Ireland, as shown at page 7 of the Return No. 475, of Session 1864, and at page 401 of the Appendix to the Report of the Irish Taxation Committee, 1864. The terms of the Order requiring a Statement of the Amount raised by Loan only; the Amounts raised by Unfunded Debt are not included in this Return. The Net Amount raised by creation of both Funded and Unfunded Debt for each Country, in each year from 1801 to 1816, inclusive, deducting the Amount issued to pay off such Debt, exclusive of Sinking Fund, is shown at page 382 of the Appendix to the Report of the Irish Taxation Committee, 1864.

PERIOD.	UNITED KINGDOM.	GREAT BRITAIN.			IRELAND.			Relative Proportion of Great Britain to Ireland, in Seventeenths		
	Col. 1. Total Actual Public Expenditure of the United Kingdom, *inclusive of Sinking Fund*, including also Collection of Revenue and Payments for National Objects out of Gross Revenue, but excluding Advances for Public Objects; after deducting £. 23,734,105. 8. 6. in each Year, for the Charge of the Pre-Union Debts of Great Britain and Ireland.	Col. 2. Gross Revenue of Great Britain applicable to Public Expenditure, deducting Drawbacks and Repayments from Gross Revenue, and Repayments of Advances from Net Revenue; deducting, also, £. 22,161,754. 0. 8., in each Year, for the Charge of the Pre-Union Debt of Great Britain.	Col. 3. Deficit (—) or Surplus (+) of Revenue of Great Britain (Col. 2), as to Fifteen-seventeenths of Total Expenditure (Col. 1).	Col. 4. Amount actually raised in each Year, *by Loan*, charged to Great Britain.	Col. 5. Gross Revenue of Ireland applicable to Public Expenditure, deducting Drawbacks and Repayments from Gross Revenue, and Repayments of Advances from Net Revenue; deducting, also, £. 1,572,351. 7. 10. in each Year, for the Charge of the Pre-Union Debt of Ireland.	Col. 6. Deficit (—) or Surplus (+) of Revenue of Ireland (Col. 5), as to Two-seventeenths of Total Expenditure (Col. 1).	Col. 7. Amount actually raised in each Year, *by Loan*, charged to Ireland.	Of Revenue, as stated in Columns 2 and 5.	Of Deficits, as stated in Columns 3 and 6.	Of Loans, as stated in Columns 4 and 7.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.			
Year ending 5 Jan. 1802	48,110,823 14 9	13,033,175 7 1	—29,417,551 9 6	27,612,893 3 7	1,611,340 4 2	—4,048,756 14 —	3,536,088 16 8	15·1 : 1·9	—14·9 : —2·1	15·1 : 1·9
„ 1803	36,534,931 18 9	14,557,056 6 5	—17,679,648 6 7	24,050,448 9 9	2,183,413 18 8	—2,114,813 7 1	3,500,000 — —	14·8 : 2·2	—15·2 : —1·8	14·8 : 2·2
„ 1804	34,076,253 14 5	15,790,875 — 2	—14,276,407 13 9	9,950,000 — —	1,804,231 4 11	—2,204,739 15 7	2,010,523 1 6	15·2 : 1·8	—14·7 : —2·3	14·1 : 1·9
„ 1805	46,702,019 12 6	23,558,029 13 1	—17,649,634 14 5	9,819,090 9 2	2,164,033 11 1	—3,330,321 13 11	4,915,116 12 —	15·6 : 1·4	—14·3 : —2·7	11·3 : 5·7
„ 1806	55,142,510 3 —	27,816,381 16 10	—20,838,774 3 6	21,221,660 3 6	2,338,028 6 9	—4,149,325 15 11	4,561,185 4 9	15·7 : 1·3	—14·2 : —2·8	14· : 3·
„ 1807	55,840,096 18 6	31,454,396 15 1	—17,816,277 — 1	18,060,948 13 7	2,925,841 6 6	—3,643,581 16 10	4,023,698 3 4	15·5 : 1·5	—14·1 : —2·9	13·9 : 3·1
„ 1808	56,968,691 5 11	36,766,061 3 10	—13,500,431 2 7	12,075,000 — —	3,410,336 1 —	—3,291,862 18 6	2,748,689 15 1	15·6 : 1·4	—13·7 : —3·3	13·8 : 3·2
„ 1809	64,939,449 17 10	39,338,542 3 5	—17,960,972 8 9	7,846,253 12 3	3,586,497 11 8	—4,053,437 14 —	4,975,133 11 —	15·6 : 1·4	—13·9 : —3·1	10·4 : 6·6
„ 1810	68,021,146 4 11	41,297,235 2 11	—18,721,423 6 2	11,929,767 — 9	3,510,950 8 2	—4,491,537 7 8	3,934,079 2 3	15·7 : 1·3	—13·7 : —3·3	12·8 : 4·2
„ 1811	70,960,892 17 —	45,045,675 16 10	—17,566,876 13 6	8,077,052 17 8	3,121,167 3 8	—5,227,173 3 —	5,218,668 6 11	15·9 : 1·1	—13·1 : —3·9	10·3 : 6·7
„ 1812	77,670,213 11 6	42,706,611 19 9	—25,825,929 8 1	12,753,469 18 3	3,439,270 2 5	—5,698,402 1 3	5,453,168 13 —	15·8 : 1·2	—13·9 : —3·1	12· : 5·
„ 1813	83,941,023 3 6	41,139,007 6 8	—32,926,601 7 —	22,192,748 15 3	4,112,186 7 3	—5,763,228 2 7	5,807,203 19 9	15·5 : 1·5	—14·5 : —2·5	13·5 : 3·5
„ 1814	100,599,125 17 8	44,932,695 1 5	—43,831,239 10 8	29,449,698 9 9	4,284,878 12 2	—7,550,312 13 5	6,993,103 9 —	15·5 : 1·5	—14·5 : —2·5	13·7 : 3·3
„ 1815	104,555,655 — 11	47,568,173 16 —	—44,686,815 18 11	33,065,710 14 —	4,819,338 1 2	—7,481,327 4 10	7,142,582 12 3	15·4 : 1·6	—14·6 : —2·4	14· : 3·
„ 1816	89,619,758 1 —	48,556,057 11 8	—30,520,199 10 5	30,484,953 3 —	4,996,555 17 10	—5,546,945 1 1	10,238,482 3 1	15·4 : 1·6	—14·4 : —2·6	12·7 : 4·3
„ 1817	65,512,770 8 3	39,977,149 15 9	—17,828,235 13 —	6,627,359 12 7	3,952,332 16 1	—3,755,051 18 5	2,547,159 1 3	15·5 : 1·5	—14· : —3·	12·3 : 4·7

III.—Similar ACCOUNT of the Revenue, Expenditure, and Loans raised in *Great Britain* and *Ireland*, in each Year from the Consolidation of the Revenues of the Two Countries, on 5 January 1817, to the Year 1821-2, so far as it can be given.

Note.—Since 5 January 1817, no separate Accounts have been kept of the separate Expenditure of each Country, the Consolidated Revenues of the Two Countries having been applied indiscriminately to the service of the United Kingdom, under the Consolidation Act, 56 Geo. 3, cap. 98; and no Loan has been raised which has been charged separately on Great Britain, or on Ireland. The Amount raised *by Loan* in each Year, and charged upon the United Kingdom, is shown in a separate column (Col. 6).

PERIOD.	UNITED KINGDOM.	GREAT BRITAIN.		IRELAND.		UNITED KINGDOM.	Relative Proportion of Great Britain to Ireland, in Seventeenths.	
	Col. 1. Total Actual Public Expenditure of the United Kingdom, *inclusive of Sinking Fund*; including, also, Collection of Revenue, and Payments for National Objects out of Gross Revenue, but excluding Advances for Public Objects; after deducting £. 23,734,105. 8. 6. in each Year, for the Charge of the Pre-Union Debts of Great Britain and Ireland.	Col. 2. Gross Revenue of Great Britain applicable to Public Expenditure, deducting Drawbacks and Repayments from Gross Revenue, and Repayments of Advances from Net Revenue; deducting, also, £. 22,161,754. 0. 8. in each Year, for the Charge of the Pre-Union Debt of Great Britain.	Col. 3. Deficit (—), or Surplus (+), of Revenue of Great Britain, (Col. 2), as to Fifteen-seventeenths of Total Expenditure (Col. 1).	Col. 4. Gross Revenue of Ireland applicable to Public Expenditure, deducting Drawbacks and Repayments from Gross Revenue, and Repayments of Advances from Net Revenue; deducting, also, £. 1,572,351. 7. 10. in each Year, for the Charge of the Pre-Union Debt of Ireland.	Col. 5. Deficit (—), or Surplus (+), of Revenue of Ireland, (Col. 4), as to Two-seventeenths of Total Expenditure (Col. 1).	Col. 6. Amount actually raised in each Year *by Loan*, charged on the United Kingdom.	Col. 7. Of Revenue, as stated in Columns 2 and 4.	Col. 8. Of Deficit or Surplus, as stated in Columns 3 and 5; showing the Proportions, in Seventeenths, of the Deficit or Surplus of the United Kingdom.
Year ending—	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.		
5 January 1818 -	49,536,115 17 7	20,778,431 18 -	— 13,929,905 12 10	3,819,055 5 7	— 2,008,723 1 2	3,193 9 1	15·07 to 1·93	—14·8 to —2·2
„ 1819 -	49,625,054 12 7	31,759,052 5 4	— 12,027,760 12 10	3,972,036 9 5	— 1,866,205 5 -	10,853,692 6 2	15·1 to 1·9	—14·7 to —2·3
„ 1820 -	50,168,334 5 8	31,033,119 8 2	— 13,233,057 18 -	3,659,198 17 8	— 2,242,958 1 10	18,788,310 8 6	15·2 to 1·8	—14·5 to —2·5
„ 1821 -	49,430,758 9 8	32,705,115 4 2	— 10,910,259 18 6	3,011,993 10 10	— 2,803,389 16 2	17,430,204 9 -	15·5 to 1·5	—13·5 to —3·5
„ 1822 -	51,246,764 7 6	33,918,013 19 7	— 11,299,719 5 10	3,403,550 2 -	— 2,625,481 - 1	13,848,000 - -	15·4 to 1·6	—13·8 to —3·2

IV.—Similar ACCOUNT of the Revenue, Expenditure and Loans raised in *Great Britain* and *Ireland*, in each Year from 5 January 1862 to 31st March 1864, so far as it can be given.

Note.—Previously to 1822, the Amount of the Sinking Fund, applied to the Reduction of the National Debt, was included in the Public Expenditure, as stated in the Finance Accounts rendered to Parliament; it was subsequently excluded from the Public Expenditure, in pursuance of the recommendation of the Finance Committee of 1822, and the Amount of the Public Expenditure for the Year ended 5 January 1823, is stated for the first time in the Finance Accounts as "exclusive of the Sums applied to the Reduction of the National Debt."

In Col. 1 of this Return, commencing with the Year ending 5 January 1823, the Amount of the Public Expenditure is consequently stated, exclusive of Sinking Fund, applied to the Reduction of the National Debt, and including that portion only which was actually applied to the Payment of Life Annuities; it differs so far from the Amounts of Public Expenditure in the previous Returns, I., II., and III., for the several Years up to 5 January 1822, in which the Public Expenditure is stated, inclusive of the Amount of Sinking Fund applied to the Reduction of the National Debt.

The Amounts raised by Loan from 1822 to 1829, were for the Sinking Fund, and they include 13,089,419 *l.* raised during these Years by the Trustees of Naval and Military Pensions, from the Sale to the Bank of England of the Annuity of 585,740 *l.* for 45 Years, expiring 5 April 1867, known as the Dead Weight Annuity.

PERIOD.	UNITED KINGDOM.	GREAT BRITAIN.		IRELAND.		UNITED KINGDOM.	Relative Proportion of Great Britain to Ireland, in Seventeenths.	
	Col. 1. Total Actual Public Expenditure of the United Kingdom, exclusive of Sinking Fund applied to the Reduction of Debt, and including Payments for Collection of Revenue, and for National Objects out of Gross Revenue, but excluding Advances for Public Objects; after deducting £. 23,734,105. 8. 6. in each Year, for the Charge of the Pre-union Debts of Great Britain and Ireland.	Col. 2. Gross Revenue of Great Britain, applicable to Public Expenditure, deducting Drawbacks and Repayments from Gross Revenue, and Repayments of Advances from Net Revenue; deducting also, £. 22,161,754. 0 *s.* 8 *d.* in each Year for the Charge of the Pre-Union Debt of Great Britain.	Col. 3. Deficit (—), or Surplus (+) of Revenue of Great Britain (Col. 2), as to Fifteen-seventeenths of Total Expenditure (Col. 1).	Col. 4. Gross Revenue of Ireland applicable to Public Expenditure, deducting Drawbacks and Repayments from Gross Revenue, and Repayments of Advances from Net Revenue; deducting also, £. 1,572,351. 7. 10. for the Charge of the Pre-Union Debt of Ireland.	Col. 5. Deficit (—), or Surplus (+), of Revenue of Ireland, (Col. 4), as to Two-seventeenths of Total Expenditure (Col. 1).	Col. 6. Amount actually raised in each Year by Loan, charged on the United Kingdom.	Col. 7. Of Revenue, as stated in Columns 2 and 4.	Col. 8. Of Deficit or Surplus, as stated in Columns 3 and 5; showing the Proportions, in Seventeenths, of the Deficit or Surplus of the United Kingdom.
	£. *s.* *d.*	£. *s.* *d.*	£. *s.* *d.*	£. *s.* *d.*	£. *s.* *d.*	£. *s.* *d.*		
Year to 5 January 1823	32,606,757 11 4	32,888,843 14 10	+4,118,175 6 –	3,142,429 7 11	— 693,659 14 7	13,172,155 9 3	15·5 to 1·5	+20·44 to —3·44
„ 1824	30,405,304 8 2	32,146,559 2 4	+5,318,349 6 11	2,579,948 14 4	— 997,145 18 5	4,578,589 – –	15·7 to 1·3	+20·9 to —3·9
„ 1825	31,867,413 10 9	33,158,908 16 8	+5,040,602 15 5	2,904,663 5 3	— 844,444 4 3	2,445,740 – –	15·6 to 1·4	+20·4 to —3·4
„ 1826	30,508,345 10 3	31,391,381 – 7	+4,472,252 12 9	2,787,109 18 7	— 802,107 3 10	2,293,240 – –	15·6 to 1·4	+20·7 to —3·7
„ 1827	32,524,607 8 5	28,817,060 8 4	+118,877 8 –	2,856,682 11 1	— 969,741 17 –	6,665,740 – –	15·4 to 1·6	+2·3 to —19·3
„ 1828	32,573,714 13 2	28,645,372 12 6	—96,140 6 2	2,898,953 14 7	— 933,247 19 11	2,199,618 5 –	15·4 to 1·6	—1·5 to —15·5
„ 1829	30,410,135 17 9	30,467,437 10 8	+3,634,964 13 10	3,095,692 4 9	— 481,970 16 2	1,975,370 – –	15·43 to 1·57	+19·6 to — 2·6
„ 1830	30,489,309 10 –	29,276,027 2 1	+2,373,695 3 10	2,924,830 14 2	— 662,146 17 7	– – – –	15·45 to 1·55	+23·5 to — 6·5
„ 1831	28,284,511 17 3	28,546,631 3 11	+3,502,356 – 5	2,651,553 15 9	— 588,682 18 –	– – – –	15·55 to 1·45	+20·43 to —3·43
„ 1832	27,977,360 – 9	24,457,818 4 3	—228,087 14 2	2,820,684 10 6	— 470,769 11 10	– – – –	15·24 to 1·76	—5·5 to —11·5
„ 1833	27,174,222 18 1	24,948,655 16 2	+971,405 6 1	2,840,326 – 7	— 356,646 7 5	– – – –	15·26 to 1·74	+26·86 to — 9·86
„ 1834	25,432,208 12 6	24,383,154 13 –	+1,942,970 11 5	2,562,137 11 1	— 429,886 19 10	– – – –	15·37 to 1·63	+21·83 to — 4·83

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App. No. 16.

Appendix, No. 16.

(Reprinted from Returns, No. 110 and 286 of Session 1865).

TAXATION, REVENUE, &c. (GREAT BRITAIN AND IRELAND).

I.—ACCOUNT of all TAXES IMPOSED in each Country and in each Year, from the Year 1802 (the Union) to the Year 1816 (the Consolidation of the Exchequers), and Proportion of Increase in each to the Year 1816.

II.—ACCOUNT of the Amount of TAXES REMITTED in *Great Britain* and *Ireland* respectively, in each Year from 1816 to 1864 inclusive; showing also the Proportion of Remission to each Country up to the Year 1864.

III.—ACCOUNT showing the Estimated Amount of TAXES IMPOSED in *Great Britain* and *Ireland* respectively, in each Year from 1816 to 1864 inclusive; showing also the Proportion of Addition to the Taxation of each Country up to the Year 1864.

Treasury, 2 March 1865. } F. PEEL.

I.—ACCOUNT of all TAXES IMPOSED in *Great Britain* and *Ireland* in each Year from the Year 1802 (the Union) to the Year 1816 (the Consolidation of the Exchequers), and Proportion of Increase in each Country to the Year 1816.

NOTE.

THERE are no means of stating with accuracy the Amount actually produced to the Exchequer of each Country from Taxes imposed during the period stated in the Order, nor the consequent proportionate increase of Revenue from such Taxes.

The fullest information that can be furnished in obedience to the Order is contained in the following Accounts, viz.:—

I. An Account of all Taxes Imposed or Augmented in Great Britain, in each year from 1801 to 1816, inclusive, showing the Annual Amounts as Estimated in the several Budgets.

II. A similar Account for Ireland.

III. An Account of all Taxes Remitted or Expired, including Land Tax Redeemed, in Great Britain, in each year from 1801 to 1816 inclusive, showing the Estimated Annual Loss to the Revenue.

IV. A similar Account for Ireland.

V. A tabular Account of the Net Estimated Annual Gain from Taxes Imposed or Augmented in Great Britain, in each year from 1801 to 1816 inclusive, after deducting the Estimated Annual Loss from Taxes Remitted or Expired, and *as compared with the Net Produce of such Taxes in the preceding year.*

VI. A similar Account of the Total Net Estimated Gain in each year, *as compared with the Net Produce of such Taxes in the year* 1800, showing the progressive and cumulative Increase.

VII. } Similar Accounts for Ireland.
VIII. }

These Accounts will show the *Estimated* Annual Increase of Revenue to be paid into the Exchequer of each Country from Taxes imposed in each year, up to 1816, and the Total Estimated Increase as compared with 1800. The Estimated Amounts of such Taxes imposed are taken from the several Budgets, as reported by Hansard, and in the Annual Register, so far as the proposed alterations of Taxation were authorised by Parliament. The Amounts thus Estimated differ to some extent from the Amounts of such Taxes imposed or augmented, as stated in the Return, No. 511, of Session 1858, in which the Amounts are stated, in the absence of official sources, to have been computed from the Budget Estimates in Hansard's Parliamentary Debates, with such additions or corrections as the experienced Officers of the Customs and Inland Revenue Departments were enabled to make from the imperfect official documents still preserved, so as to show with more accuracy the Estimated Gain to the Revenue. In the Return, No. 511, of Session 1858, also, the several Duties on Tea, Tobacco, Wine, Spirits, &c., collected by the Excise in the earlier years of the period comprised in the Return, are included in Customs Duties, to which Department they were afterwards transferred.

But

But the several Amounts of Taxes imposed or augmented thus Estimated, represent the *annual* Gain to the Exchequer prospectively calculated, and such Estimated Amounts must necessarily differ considerably from the Amount actually produced to the Exchequer within the year in which the Taxes were imposed, being levied for a portion only of such year, as may be seen from the date of commencement of each Tax, as specified in the Accounts Nos. I. and II.

A considerable difference must also exist between the Estimated Annual Amount and the Actual Annual Produce of such Taxes, arising in the case of New Duties, from the unavoidably uncertain Estimate of such Produce, and in the case of augmented Duties, from the diminished Produce or Consumption of Articles thus subjected to increased Taxation.

At the same time it should be borne in mind, when estimating the Net Annual Gain from New Taxes, after deducting the Estimated Annual Loss from Taxes remitted or expired, that upon the remission or expiration of a Tax at a fixed date, there remains continually a considerable Gain to the Revenue, to be set against the Annual Loss, not only from the Amount of the Tax received up to such date in the year in which the remission or expiration takes place, but also from the Arrears of the Tax received subsequently to such date.

In order, however, to show as accurately as can now be stated, the proportionate increase of Revenue paid to the Exchequer of each Country, between 1801 and 1816, from the Total Actual Net Produce of Taxes increased by new or augmented Rates, for the purpose of comparison with the Estimated Amounts, and with each other, such information is afforded by the following Accounts:—

IX. An Account of the Total Net Produce paid into the Exchequer of Great Britain, in each year from 1800 to 1816 inclusive, under the several heads of Revenue from Taxation, in which alterations of the Rates were made by Parliament.

X. An Account of the Total Increase of such Actual Net Produce, in each year from 1801 to 1816, as compared with 1800, showing the progressive and cumulative Increase.

XI. } Similar Accounts for Ireland.
XII. }

These Accounts will afford the means of showing the proportional Increase both of the Estimated and of the Actual Net Produce of such Taxation in each Country, under the several detailed heads of Revenue, in each year from 1801 to 1816 inclusive, whilst the general result for the whole period will be shown in the following Account:

XIII. An Account of the proportion of Increase of the Revenue of Great Britain and Ireland respectively, for the whole period from 1801 to 1816 inclusive, arising from—

1. The Total Net Estimated Gain, prospectively calculated, from Taxes Imposed or Augmented, after deducting the Estimated Loss from Taxes Remitted or Expired;
2. The Total Increase of the Actual Net Produce of Taxes subjected to Alterations of Rates;
3. The Total Increase of the Actual Gross Produce of such Taxes.

In these Accounts, so far as relates to Great Britain, the War Taxes are distinctly shown, their amounts having been directed by the several Acts to be kept separate in the Exchequer books. It may be stated in explanation, that the first imposition of these War Taxes, or Taxes imposed during the continuance, and to provide for the extraordinary expenditure of the War, occurred in 1798, under the Act 38 Geo. 3, c. 76. This Act imposed certain Customs Duties on Exports and Imports, from 5th July 1798, to continue until the signing of the Preliminary Articles of Peace, and no longer. These Duties on Goods and Shipping, as they are termed in the Finance Accounts, were also known as Convoy Duties, having been imposed to defray the extraordinary expenses arising from protecting ships under convoy. The amounts of the Estimated and the Actual Net Produce were as follows:

YEAR.	Estimated Net Annual Produce.			Actual Net Produce within the Year.		
	£.	s.	d.	£.	s.	d.
1798	1,500,000	–	–	629,033	–	–
1799	1,500,000	–	–	1,200,309	–	–
1800	1,250,000	–	–	1,232,196	–	–
1801	1,250,000	–	–	990,067	–	–

These War Customs Duties expired on 1st October 1801, the date of signing Preliminary Articles of Peace, but nearly the whole of them were reimposed as permanent Duties in the following year, to supply in part the loss of the Income Duty which was then repealed.

Other War Duties of Customs and Excise, and the Property and Income Tax, were imposed in 1803, and following years. These were to cease and determine at certain periods, from six to twelve months after the ratification of a definitive Treaty of Peace, which occurred on 30th May 1814. Of these War Duties, the Property Tax expired on 5th April 1815; War Customs, to the estimated amount of 919,761 *l.*, on 30th November 1814, and 214,650 *l.* on 5th July 1815; the Excise War Duty on Malt was temporarily continued from 30th May 1815, but expired on 5th July 1816, its estimated annual net produce being then 2,792,000 *l.* The other Customs and Excise War Duties having been also temporarily continued by Parliament till 5th July 1816, were made permanent from that day, by the Acts 56 Geo. 3, cc. 17 and 29.

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The Total Amount of these War Taxes actually paid into the Exchequer in the 16 years from 1801 to 1816 inclusive, was as follows:

	AMOUNT.	Proportion per Cent.
	£. s. d.	
War Customs - - - -	35,053,556 2 10	13·2
War Excise - - - -	79,996,118 11 1	30·2
Property and Income Duty, including Arrears of War Assessed Taxes - - - - -	149,687,345 15 5	56·6
£.	264,737,020 9 4	100

No such War Taxes were imposed in Ireland, to cease on the termination of the war; nor do any such Additional Rates of Customs and Excise appear to have been imposed in Ireland, equivalent to the War Rates of Customs and Excise in Great Britain, with the exception of the Malt War Tax; this was a War Rate of 2 *s.* a bushel, imposed in Great Britain in 1803, and estimated to produce 2,700,000 *l.* a year. An Additional Equivalent Rate was imposed in Ireland, as follows:

	s.	*d.*		£.
In 1813, additional	–	9	a bushel, estimated to produce, per annum -	106,154
In 1815, additional	1	3	a bushel, estimated to produce, per annum -	138,462
	2	–		244,616

This Additional Rate of 2 *s.* a bushel on malt in Ireland was repealed, at an Estimated Annual Loss of 273,925 *l.*, on 5th July 1816, at the same time with the Malt War Rate in Great Britain, under the proviso in the 7th Article of the Treaty of Union, that "No article in Ireland shall be liable to any new or additional duty, by which the whole amount payable thereon would exceed the amount which will be thereafter payable in England on the like article."

With regard to the other Pre-Union War Taxes of Great Britain, received at the Exchequer after the Union, it may be noticed that War Assessed Taxes were imposed in Great Britain in 1798, by the Act 38 Geo. 3, c. 16, to provide for the increasing expenditure of the war, though not made payable during its continuance, but until certain loans charged upon them were paid off by the Sinking Fund. These Additional Rates, estimated to amount on an average to treble the rates then in force, and to produce 7,000,000 *l.* annually, were imposed from 12th January 1798, upon a rising scale in proportion to the assessment, and were declared by Mr. Pitt to be "really a tax on income, on the visible criterion of the Assessed Taxes;" including voluntary contributions, combined with these War Assessed Taxes, the net produce amounted in 1798 to 3,794,553 *l.*, and in 1799 to 2,037,139 *l.*

But from 5th April 1799, a more direct Income Tax was substituted for these War Assessed Taxes, which were then repealed, although arrears to a large amount were afterwards received. This new Income Tax was imposed by the Act 39 Geo. 3, c. 13, and was to cease under similar conditions to the War Assessed Taxes; its Estimated and Actual Net Produce were as follows:—

YEAR.	Estimated Annual Net Produce.	Actual Net Produce within the Year.
	£. s. d.	£. s. d.
1799 - - - - - -	7,500,000 – –	2,672,065 – –
1800 - - - - - -	7,000,000 – –	4,759,318 – –
1801 - - - - - -	6,000,000 – –	5,651,642 – –

Immediately after the Peace of Amiens, these Duties on Income were repealed from 5th April 1802, by the Act 42 Geo. 3, c. 42, at an Estimated Annual Loss of 5,600,000 *l.*; and in lieu of them, certain Duties of Customs, Excise, and Assessed Taxes were permanently imposed, to the Estimated Annual Amount of 4,000,000 *l.*

GREAT BRITAIN.

I.—AN ACCOUNT of all Taxes Imposed or Augmented in each Year from 1801 to 1816 inclusive, showing the Amounts as Estimated in the several Annual Budgets.

Years.		Date of Commencement as specified in the several Acts.	Customs.	Excise.	Stamps.	Assessed Taxes.	Post Office.	Income and Property.	Total.
			£.	£.	£.	£.	£.	£.	£.
1801	Timber, one-third added to previous rates	1 May 1801	95,000	—	—	—	—	—	—
	Pepper, additional, 3 *d.* per lb.	1 May „	15,000	—	—	—	—	—	—
	Sugar, additional, 1 *s.* 8 *d.* per cwt.—(*Note.*—1 *s.* 10 *d.* per cwt. War Convoy Duty, expired 1 October 1801, on signing of preliminary articles of peace.)	1 May „	166,000	—	—	—	—	—	—
	Raisins, additional, 1 *s.* 6 *d.* per cwt.	1 May „	10,000	—	—	—	—	—	—
	Lead, exported, rate increased from 2 *l.* 9 *s.* 8 *d.* to 3 *l.* 9 *s.* 8 *d.* per ton.	1 May „	12,000	—	—	—	—	—	—
	Tea, additional 10 per cent. on higher sorts	1 Mar. „	—	300,000	—	—	—	—	—
	Paper, Duty doubled	5 April „	—	130,000	—	—	—	—	—
	Bills and Notes, additional 50 per cent.	5 June „	—	—	112,000	—	—	—	—
	Ship Policies, rates doubled	5 April „	—	—	145,000	—	—	—	—
	Conveyance Deeds, additional, 3 *s.* a skin	5 July „	—	—	93,000	—	—	—	—
	Ditto additional rates (*a*)	5 July „	—	—	62,000	—	—	—	—
	Ale Licenses (*a*)	5 July „	—	—	32,000	—	—	—	—
	Cards and Dice (*a*)	1 Aug. „	—	—	20,000	—	—	—	—
	Additional Probate of Wills (*a*)	10 Oct. „	—	—	120,000	—	—	—	—
	Horses, additional, 10 *s.* pleasure, 4 *s.* agriculture	5 April „	—	—	—	306,000	—	—	—
	Penny Postage doubled	5 April „	—	—	—	—	17,000	—	—
	New Postal Regulations	5 April „	—	—	—	—	133,000	—	—
		£.	298,000	430,000	584,000	306,000	150,000	—	1,768,000
1802	Exports and Imports, various additional Duties (in continuation of similar amounts of War Convoy Duties, expired 1 October 1801, on signing of preliminary articles of peace).	12 May 1802	1,000,000	—	—	—	—	—	—
	Malt, Hops, and Beer, additional Duties	1 May „	—	2,000,000	—	—	—	—	—
	Assessed Taxes, additional duties	5 April „	—	—	—	1,000,000	—	—	—
	Total (in lieu of Income Tax repealed)	£.	1,000,000	2,000,000	—	1,000,000	—	—	4,000,000
1803	Exports and Imports, various new and additional War Duties	5 July 1803	2,000,000	—	—	—	—	—	—
	Exports and Imports, various permanent	5 July „	250,000	—	—	—	—	—	—
	Tea, additional 15 per cent. and 45 per cent., War Duties	5 July „	—	1,300,000	—	—	—	—	—
	Wine, additional War Duties	5 July „	—	300,000	—	—	—	—	—
	Spirits, 50 per cent. additional War Duties	5 July „	—	1,500,000	—	—	—	—	—
	Malt, additional War Duties	5 July „	—	2,700,000	—	—	—	—	—
	Bricks, various additional rates, permanent duties (*b*)	5 July „	—	40,000	—	—	—	—	—
	Paper, additional Duty, permanent Duties (*b*)	5 July „	—	5,000	—	—	—	—	—
	Receipt Stamps, additional	10 Oct. „	—	—	220,000	—	—	—	—
	Consolidated Assessed Taxes	5 April 1804	—	—	—	220,000	—	—	—
	Land and Property Tax, 5 per cent. War Duty	5 April 1803	—	—	—	—	—	4,500,000	—
		£.	2,250,000	5,845,000	220,000	220,000	—	4,500,000	13,035,000
1804	Exports and Imports, additional War Duties	1 June 1804	800,000	—	—	—	—	—	—
	Wine, additional War Duties	30 April „	—	200,000	—	—	—	—	—
	Consolidating and additional Stamp Duties	10 Oct. „	—	—	800,000	—	—	—	—
		£.	800,000	200,000	800,000	—	—	—	1,800,000
1805	Various, additional, on Imports	5 April 1805	202,400	—	—	—	—	—	—
	Salt Duty, additional, 5 *s.* a bushel	22 Feb. „	—	490,000	—	—	—	—	—
	Glass, additional, 50 per cent.	5 April „	—	80,000	—	—	—	—	—
	Bricks, additional, 10 *d.* per 1,000	5 April „	—	37,000	—	—	—	—	—
	Auctions, additional	5 April „	—	31,000	—	—	—	—	—
	Coffee, additional, 6 *d.* per lb.	29 Mar. „	—	28,000	—	—	—	—	—
	Cider, additional, 10 *s.* a hogshead	5 April „	—	15,000	—	—	—	—	—
	Vinegar, additional, 5 *s.* a barrel	5 April „	—	11,000	—	—	—	—	—
	Gold and Silver Wire, doubled	5 April „	—	5,000	—	—	—	—	—
	Legacies, additional	5 April „	—	—	330,000	—	—	—	—
	Horses, additional, 20 per cent.	5 April „	—	—	—	110,000	—	—	—
	Additional Postage rates	12 Mar. „	—	—	—	—	230,000	—	—
	Income and Property, additional, 1½ per cent. War Duty	5 April „	—	—	—	—	—	1,150,000	—
		£.	202,400	697,000	330,000	110,000	230,000	1,150,000	2,719,400

(*a*) Substituted, 20th May, for additional export duty, 6 *d.* per lb. on Pepper, 104,000 *l.*; and additional 1 *d.* a yard on printed Calicoes, 155,000 *l.*; originally proposed in Budget, but subsequently abandoned.
(*b*) Not specified in Budget.

I.—An Account of all Taxes Imposed or Augmented in each Year from 1801 to 1816 inclusive, &c.—*continued.*

Years.		Date of Commencement as specified in the several Acts.	Customs.	Excise.	Stamps.	Assessed Taxes.	Post Office.	Income and Property.	Total.
			£.	£.	£.	£.	£.	£.	£.
1806	Customs, War Duties, increased	10 May 1806	(a)370,000	—	—	—	—	—	—
	Tobacco and Snuff, additional War Duty	5 May „	- -	300,000	—	—	—	—	—
	Equalization of Tea Duty (partly Customs)	5 May „	- -	70,000	—	—	—	—	—
	Appraisements, new Duty	5 July „	- -	- -	66,000	—	—	—	—
	Assessed Taxes, additional 10 per cent. (b)	5 April „	- -	- -	-	500,000	—	—	—
	Property Duty, increased to 10 per cent.	5 April „	- -	- -	-	- -	-	5,000,000	—
		£.	370,000	370,000	66,000	500,000	-	5,000,000	6,306,000
1807	Excise, War Duty, 2 *s.* 6 *d.* per gallon additional on Foreign Spirits	19 Feb. 1807	- -	300,000	-	- -	-	- -	300,000
1808	Stamps, additional	30 June 1808	- -	- -	170,000	—	—	—	—
	Assessed Taxes, additional	30 June „	- -	- -	-	120,000	—	—	—
		£.	- -	- -	170,000	120,000	-	- -	290,000
1809	Customs Duties, Consolidated	5 July 1809	105,000	—	—	—	—	—	—
	War Duties - - ditto	5 July „	105,000	—	—	—	—	—	—
		£.	210,000	- -	-	- -	-	- -	210,000
1810	- - - - Nil. - - - - -	—	—	—	—	—	—	—	—
1811	Customs, War Duties, increased	1 July 1811	693,600	—	—	—	—	—	—
	Excise, additional, British and Foreign Spirits	10 May „	- -	751,000	—	—	—	—	—
	Ditto additional, War Duties	1 Aug. „	- -	25,900	—	—	—	—	—
		£.	693,600	776,900	-	- -	-	- -	1,470,500
1812	Discontinuing Bounty on export of printed Goods	5 July 1812	308,000	—	—	—	—	—	—
	Double Duty on Hides, Skins, and Leather	5 July „	- -	325,000	—	—	—	—	—
	Ditto - Glass	5 July „	- -	328,000	—	—	—	—	—
	Additional 10 per cent. on Tobacco	5 July „	- -	107,000	—	—	—	—	—
	Additional, Assessed Taxes	5 April „	- -	- -	-	515,000	—	—	—
	Postage, additional, 1 *d.*	9 July „	- -	- -	-	- -	220,000	—	—
		£.	308,000	760,000	-	515,000	220,000	- -	1,803,000
1813	Customs, additional, 25 per cent., with certain exceptions	15 April 1813	850,000	—	—	—	—	—	—
	Ditto, additional War Duties on Exports and Imports	15 April „	350,000	—	—	—	—	—	—
	Excise, additional, on Tobacco	1 April „	- -	100,000	—	—	—	—	—
	Ditto - ditto - French Wines	1 April „	- -	30,000	—	—	—	—	—
		£.	1,200,000	130,000	-	- -	-	- -	1,330,000
1814	Nil in Budget.								
	Customs, additional permanent Duties in lieu of War Duties repealed	10 May 1814	75,000	—	—	—	—	—	—
	Excise, additional, on Salt from Scotland	5 Jan. „	- -	20,000	—	—	—	—	—
		£.	75,000	20,000	-	- -	-	- -	95,000
1815	Additional, Customs, Tobacco	21 Feb. 1815	150,000	—	—	—	—	—	—
	Excise, Tobacco	18 Feb. „	- -	150,000	—	—	—	—	—
	Ditto, additional, Licenses	18 Feb. „	- -	300,000	—	—	—	—	—
	Stamps, additional, on Deeds, Bankers' Notes, Probates, Fire Insurance, &c.	31 Aug. „	- -	- -	1,075,000	—	—	—	—
	Postage, additional, Newspapers and Ship Letters	11 July „	- -	- -	-	- -	125,000	—	—
		£.	150,000	450,000	1,075,000	- -	125,000	- -	1,800,000
1816	Customs, additional, on Butter and Cheese	5 April 1816	55,000	—	—	—	—	—	—
	Ditto, discontinuing Drawback on Sugar	5 July „	165,000	—	—	—	—	—	—
	Excise, additional, Soap	31 May „	- -	200,000	—	—	—	—	—
		£.	220,000	200,000	-	- -	-	- -	420,000
	Total in the 16 years, from 1801 to 1816, viz.:								
	Permanent Taxes		3,458,400	5,553,000	3,245,000	2,771,000	725,000	- -	15,752,400
	War Taxes		4,318,600	6,625,900	-	- -	-	10,650,000	21,594,500
	Total £.		7,777,000	12,178,900	3,245,000	2,771,000	725,000	10,650,000	37,346,900

(*a*) The additional duty on Sugar, estimated at 330,000 *l.*, included in the new taxes proposed in the Budget, to the total amount of 700,000 *l.*, being imposed conditionally, did not take effect.
(*b*) Substituted, 9th June, for duty of 2 *l.* per ton on iron, estimated to produce 500,000 *l.*, proposed in Budget, but rejected 10th May.

IRELAND.

II.—AN ACCOUNT of all Taxes Imposed or Augmented, in each Year from 1801 to 1816 inclusive, showing the Amounts as Estimated in the several Annual Budgets.

Note.—In the Irish Budgets the amounts are stated in Irish currency; they are here converted into British currency.

Years.		Date of Commencement as specified in the several Acts.	Customs.	Excise.	Stamps.	Assessed Taxes.	Post Office.	Total.
			£.	£.	£.	£.	£.	£.
1801	Sugar, additional, 2 *s.* 8 *d.* per cwt.	10 May 1801	22,154	—	—	—	—	—
	Coals, additional, 10 *d.* per ton	10 May „	15,692	—	—	—	—	—
	Tea, 20 per cent. under 2 *s.* 6 *d.* per lb. and 35 per cent. over	10 May „	120,923	—	—	—	—	—
	Spirits, additional, 6 *d.* per gallon	25 Mar. „	—	103,385	—	—	—	—
	Stamps, additional, on Notes, &c.	24 Mar. „	—	—	4,615	—	—	—
	New Postal Regulations	—	—	—	—	—	4,615	—
		£.	158,769	103,385	4,615	—	4,615	271,384
1802	Not specified in Budget; viz.:							
	Tea, additional, 3½ per cent. *ad valorem*	July 1802	12,000	—	—	—	—	—
	Foreign Spirits, additional, 3 *d.* per gallon	—	9,231	—	—	—	—	—
	Other articles, increased various rates	—	50,769	—	—	—	—	—
		£.	72,000	—	—	—	—	72,000
1803	Exports and Imports, additional	14 June 1803	172,615	—	—	—	—	—
	Irish Spirits, 9 *d.* a gallon, additional	14 June „	—	138,462	—	—	—	—
	Malt, additional, 1 *s.* a barrel	24 June „	—	129,231	—	—	—	—
		£.	172,615	267,693	—	—	—	440,308
1804	Wine, additional (Customs and Excise)	10 July 1804	100,616	—	—	—	—	—
	Sugar, additional, and equalised	10 July „	35,353	—	—	—	—	—
	Tea, double Duties	10 July „	166,153	—	—	—	—	—
	Duties payable in British currency, additional, $\frac{1}{19}$	20 July „	124,616	143,077	—	—	—	—
	Tobacco, additional, 4 *d.* per lb.	10 July „	—	103,384	—	—	—	—
	Malt, additional, 1 *s.* 5 *d.* per barrel	10 July „	—	58,846	—	—	—	—
	Irish Spirits, additional, 2½ *d.* per gallon	10 July „	—	37,846	—	—	—	—
	Excise Regulations	20 July „	—	369,232	—	—	—	—
	Stamps, additional	20 July „	—	—	17,539	—	—	—
		£.	426,738	712,385	17,539	—	—	1,156,662
1805	Additional, Imports	25 Mar. 1805	48,231	—	—	—	—	—
	Paper, Auctions, &c.	25 Mar. „	—	11,077	—	—	—	—
	Stamps and Licenses, additional	25 Mar. „	—	—	64,615	—	—	—
	Horses and Dogs	25 Mar. „	—	—	—	44,308	—	—
	Carriages	25 Mar. „	—	—	—	9,230	—	—
	Additional 15 *s.* on Male Servants of Bachelors	25 Mar. „	—	—	—	3,692	—	—
	Additional Hearth Duty	25 Mar. „	—	—	—	13,846	—	—
	Window Duty, additional, 25 per cent.	25 Mar. „	—	—	—	28,616	—	—
	Additional, 1 *d.* postage	4 April „	—	—	—	—	18,462	—
		£.	48,231	11,077	64,615	99,692	18,462	242,077
1806	Sugar, additional, 3 *s.* 6 *d.* per cwt.	14 June 1806	55,384	—	—	—	—	—
	Iron, additional, 2 *s.* per cwt.	14 June „	13,846	—	—	—	—	—
	Tea, additional, 20 per cent. on Tea under 2 *s.* 6 *d.* per lb.	14 June „	1,846	—	—	—	—	—
	Abolition of Portage to Ships' Captains	14 June „	4,616	—	—	—	—	—
	Discontinuing Bounties on Distilleries	14 June „	—	64,615	—	—	—	—
	Additional Malt Duties in County Dublin	14 June „	—	55,385	—	—	—	—
	Regulating Hats, Auctions, and Paper	29 Sept. „	—	4,616	—	—	—	—
	Additional Stamps and regulating	5 July „	—	—	92,308	—	—	—
		£.	75,692	124,616	92,308	—	—	292,616
1807	Additional Customs	1 Aug. 1807	27,692	—	—	—	—	—
	Additional Duty on Distilleries	25 Mar. „	—	110,769	—	—	—	—
	Discontinuing Allowances on Distilleries	25 Mar. „	—	73,846	—	—	—	—
	Additional Paper	25 Mar. „	—	4,616	—	—	—	—
	Stamps, additional	1 Aug. „	—	—	13,846	—	—	—
	Additional Hats' Licenses	1 Aug. „	—	—	9,231	—	—	—
	Additional Horses, Cars, &c.	25 Mar. „	—	—	—	36,923	—	—
		£.	27,692	189,231	23,077	36,923	—	276,923

II.—An Account of all Taxes Imposed or Augmented, in each Year from 1801 to 1816 inclusive, &c.—*continued.*

Years.		Date of Commencement as specified in the several Acts.	Customs.	Excise.	Stamps.	Assessed Taxes.	Post Office.	Total.
			£.	£.	£.	£.	£.	£.
1808	Foreign Spirits	10 June 1808	20,769	—	—	—	—	—
	Additional Duties on Distilleries	23 June „	- -	307,385	—	—	—	—
		£.	20,769	307,385	- -	- -	- -	328,154
1809	Prohibiting Raw Corn in Breweries	13 Mar. 1809	- -	228,923	—	—	—	—
	Additional Duty on Spirits	29 Sept „	- -	120,000	—	—	—	—
	Additional Works on Stills	- -	- -	221,539	—	—	—	—
		£.	- -	570,462	- -	- -	- -	570,462
1810	Additional Customs	20 June 1810	173,539	—	—	—	—	—
	Stamps	15 July „	- -	- -	27,692	—	—	—
	Taxes, additional, 50 per cent., Windows	5 Jan. „	- -	- -	- -	78,461	—	—
	Postage, additional, 1 *d.*	5 Jan. „	- -	- -	- -	- -	32,308	—
		£.	173,539	- -	27,692	78,461	32,308	312,000
1811	Additional Customs	1 June 1811	211,385	- -	- -	- -	- -	211,385
1812	Regulation of Tobacco Duties	10 June 1812	- -	384,923	—	—	—	—
	Double Duty on Spirits	8 April „	- -	414,462	—	—	—	—
	Repeal of Bounty on Retail of Spirits	25 Mar. „	- -	36,923	—	—	—	—
		£.	- -	836,308	- -	- -	- -	836,308
1813	Additional Customs	17 May 1813	221,538	—	—	—	—	—
	Additional Excise, Tobacco, 4 *d.* per lb.	17 May „	- -	23,077	—	—	—	—
	Ditto - - - Malt, 3 *s.* a barrel	17 May „	- -	106,154	—	—	—	—
	Ditto - - - Spirits, 6 *d.* a gallon	6 July „	- -	101,538	—	—	—	—
	Ditto - - - Leather Regulations	29 Sept. „	- -	4,616	—	—	—	—
	Assessed Taxes, additional, 25 per cent.	1 Jan. 1814	- -	- -	- -	92,308	—	—
	Postage, alteration of Duties	13 June 1813	- -	- -	- -	- -	13,846	—
		£.	221,538	235,385	- -	92,308	13,846	563,077
1814	Customs Duties on various articles equalised with Great Britain	5 July 1814	184,615	—	—	—	—	—
	Excise, additional, 25 per cent. on Spirits	25 July „	- -	276,923	—	—	—	—
	Ditto - - - ditto - - Glass	14 Aug. „	- -	13,846	—	—	—	—
	Stamps, Game Certificates	23 July „	- -	- -	923	—	—	—
	Postage Regulations	2 Aug. „	- -	- -	- -	- -	4,616	—
		£.	184,615	290,769	923	- -	4,616	480,923
1815	Customs, additional, Tobacco	22 Mar. 1815	62,308	—	—	—	—	—
	Ditto - - - Silk and Hops	12 May „	13,846	—	—	—	—	—
	Excise, Tobacco	22 Mar. „	- -	66,923	—	—	—	—
	Ditto, Malt	5 June „	- -	138,461	—	—	—	—
	Ditto, Spirits, 6 *d.* per gallon	19 June „	- -	101,538	—	—	—	—
	Ditto, Regulating, 6 *d.* per gallon	5 July „	- -	110,769	—	—	—	—
	Stamps, additional	5 July „	- -	- -	41,539	—	—	—
	Assessed Taxes, equalised with Great Britain	5 Jan. „	- -	- -	- -	166,154	—	—
		£.	76,154	417,691	41,539	166,154	- -	701,538
1816	Not specified in Budget; viz.: Silk, additional	- -	10,976	- -	- -	- - -	- -	10,976
	Total in the 16 Years, from 1801 to 1816 inclusive, in British Currency	£.	1,880,713	4,066,387	272,308	473,538	73,847	6,766,793

GREAT BRITAIN.

III.—AN ACCOUNT of all Taxes Remitted or Expired, including Land Tax Redeemed, in each Year from 1801 to 1816 inclusive, showing the Estimated Annual Loss to the Revenue.

Note.—The Act of Union took off all Duties upon Exports between the two Countries; a decrease of Customs Revenue in each Country was the consequent result, but the amount does not appear to have been estimated.

Years.		Date when Ceased.	PERMANENT TAXES.						WAR.			
			Customs.	Excise.	Stamps.	Land Tax Redeemed.	Assessed Taxes.	Post Office.	Customs.	Excise.	Income, &c.	Total.
			£.	£.	£.	£.	£.	£.	£.	£.	£.	£.
1801	War Convoy Duties expired	1 Oct. 1801	- -	- -	- -	- -	- -	- -	1,232,196	- -	- -	1,265,483
	Land Tax redeemed	- -	- -	- -	- -	33,287	- -	- -	- -	- -	- -	
1802	Income Duty repealed	5 Apr. 1802	- -	- -	- -	- -	- -	- -	- -	- -	5,600,000	5,616,470
	Land Tax redeemed	- -	- -	- -	- -	16,470	- -	- -	- -	- -	- -	
1803	Paper, certain rates reduced	5 July 1806	- -	30,000	- -	- -	- -	- -	- -	- -	- -	85,819
	Land Tax redeemed	- -	- -	- -	- -	55,819	- -	- -	- -	- -	- -	
1804	Ditto	- -	- -	- -	- -	16,748	- -	- -	- -	- -	- -	16,748
1805	Ditto	- -	- -	- -	- -	12,915	- -	- -	- -	- -	- -	12,915
1806	Ditto	- -	- -	- -	- -	9,652	- -	- -	- -	- -	- -	9,652
1807	Ditto	- -	- -	- -	- -	7,304	- -	- -	- -	- -	- -	7,304
1808	Coffee Duty reduced	10 Oct. 1808	60,000	- -	- -	- -	- -	- -	- -	- -	- -	66,289
	Land Tax redeemed	- -	- -	- -	- -	6,289	- -	- -	- -	- -	- -	
1809	Cotton Duty reduced	5 July 1809	40,000	- -	- -	- -	- -	- -	- -	- -	- -	63,938
	Raisins Duty reduced	5 July ,,	10,000	- -	- -	- -	- -	- -	- -	- -	- -	
	Tobacco Duty reduced	30 Mar. ,,	7,500	- -	- -	- -	- -	- -	- -	- -	- -	
	Land Tax redeemed	- -	- -	- -	- -	6,438	- -	- -	- -	- -	- -	
1810	Ditto	- -	- -	- -	- -	6,926	- -	- -	- -	- -	- -	6,926
1811	Hat Duty repealed	5 July 1811	- -	- -	29,000	- -	- -	- -	- -	- -	- -	36,006
	Land Tax redeemed	- -	- -	- -	- -	7,006	- -	- -	- -	- -	- -	
1812	Ditto	- -	- -	- -	- -	11,553	- -	- -	- -	- -	- -	11,553
1813	Ditto	- -	- -	- -	- -	6,841	- -	- -	- -	- -	- -	6,841
1814	Customs—War Duty on French Goods reduced	10 May 1814	- -	- -	- -	- -	- -	- -	125,000	- -	- -	1,084,242
	,, War Duties expired	30 Nov. ,,	- -	- -	- -	- -	- -	- -	919,761	- -	- -	
	Excise Duty on French Wines reduced	4 June ,,	- -	30,000	- -	- -	- -	- -	- -	- -	- -	
	Land Tax redeemed	- -	- -	- -	- -	9,481	- -	- -	- -	- -	- -	
1815	Customs—War Duty, 1 *d.* per lb. Cotton Wool expired	5 July 1815	- -	- -	- -	- -	- -	- -	214,650	- -	- -	14,563,228
	Auction Duty on Sheep's Wool reduced	5 July ,,	- -	5,000	- -	- -	- -	- -	- -	- -	- -	
	Epsom Salts Duty repealed	11 July ,,	- -	20,000	- -	- -	- -	- -	- -	- -	- -	
	War Property and Income Tax expired	5 Apr. ,,	- -	- -	- -	- -	- -	- -	- -	- -	14,318,573	
	Land Tax redeemed	- -	- -	- -	- -	5,005	- -	- -	- -	- -	- -	
1816	Lead Export Duty repealed	11 Apr. 1816	40,967	- -	- -	- -	- -	- -	- -	2,792,000	- -	3,124,122
	Malt War Duty, 2 *s.* per bushel, expired	5 July ,,	- -	- -	- -	- -	- -	- -	- -	- -	- -	
	Licenses to Retail Dealers of Spirits (Scotland) reduced	10 Nov. ,,	- -	17,000	- -	- -	- -	- -	- -	- -	- -	
	Land Tax redeemed	- -	- -	- -	- -	3,485	- -	- -	- -	- -	- -	
	Assessed Taxes on Servants and Horses in Husbandry	5 Apr. 1816	- -	- -	- -	- -	270,670	- -	- -	- -	- -	
	Total, from 1801 to 1816 inclusive	£.	158,467	102,000	29,000	215,219	270,670	- -	2,491,607	2,792,000	19,918,573	25,977,536

IRELAND.

(In British Currency.)

IV.—AN ACCOUNT of all Taxes Remitted or Expired, in each Year from 1801 to 1816 inclusive, showing the Estimated Annual Loss to the Revenue.

Years.		Date when Ceased.	Customs.	Excise.	Stamps.	Assessed Taxes.	Post Office.	Total.
			£.	£.	£.	£.	£.	£.
1801	——	—	—	—	—	—	—	—
1802	——	—	—	—	—	—	—	—
1803	——	—	—	—	—	—	—	—
1804	——	—	—	—	—	—	—	—
1805	——	—	—	—	—	—	—	—
1806	Duty on Houses with less than six windows repealed	5 May 1806	- -	- -	- -	10,000	- -	10,000
1807	——	—	—	—	—	—	—	—
1808	——	—	—	—	—	—	—	—
1809	——	—	—	—	—	—	—	—
1810	Spirits (Ireland) reduced 1 *s.* 6½ *d.* per gallon	5 Mar. 1810	- -	180,000	- -	- -	- -	180,000
1811	——	—	—	—	—	—	—	—
1812	——	—	—	—	—	—	—	—
1813	——	—	—	—	—	—	—	—
1814	Glass repealed	1 Dec. 1814	- -	15,000	- -	- -	- -	27,164
	Duties on Exports reduced	30 Nov. ,,	12,164	- -	- -	- -	- -	
1815	Sweets reduced	28 June 1815	- -	15,000	- -	- -	- -	23,099
	Duty on Cotton Wool reduced	5 July ,,	8,099	- -	- -	- -	- -	
1816	Slaves from America reduced	26 June 1816	11,921	- -	- -	- -	- -	382,080
	Malt reduced from 4 *s.* 5 *d.* to 2 *s.* 5 *d.* per bushel	5 July ,,	- -	273,925	- -	- -	- -	
	Spirits reduced 6 *d.* per gallon	5 July ,,	- -	54,000	- -	- -	- -	
	Assessed Taxes, various, reduced	5 Jan. ,,	- -	- -	- -	42,234	- -	
	Total, from 1801 to 1816 inclusive	£.	32,184	537,925	- -	52,234	- -	622,343

GREAT BRITAIN.

V.—AN ACCOUNT of the Net Estimated Annual Gain of Taxes Imposed or Augmented, after deducting the Estimated Annual Loss of Taxes Remitted or Expired, *as compared with the Net Produce of the preceding Year.*

Note.—The Amount of Estimated Loss, when in Excess of Estimated Gain, is distinguished as —, and by *Italic Figures.*

YEARS.	PERMANENT TAXES.					WAR TAXES.			
	Customs.	Excise.	Stamps.	Land and Assessed Taxes.	Post Office.	Customs.	Excise.	Income and Property.	Total.
	£.	£.	£.	£.	£.	£.	£.	£.	£.
1801	298,000	430,000	584,000	272,713	150,000	*—1,232,196*	- -	- -	502,517
1802	1,000,000	2,000,000	- -	983,530	–	- -	- -	*—5,600,000*	*—1,616,470*
1803	250,000	15,000	220,000	164,181	–	2,000,000	5,700,000	4,500,000	12,849,181
1804	- -	- -	800,000	*—16,748*	–	800,000	200,000	- -	1,783,252
1805	202,400	697,000	330,000	97,085	230,000	- -	- -	1,150,000	2,706,485
1806	- -	70,000	66,000	490,348	–	370,000	300,000	5,000,000	6,296,348
1807	- -	- -	- -	*—7,304*	–	- -	300,000	- -	292,696
1808	*—60,000*	- -	170,000	113,711	–	- -	- -	- -	223,711
1809	47,500	- -	- -	*—6,438*	–	105,000	- -	- -	146,062
1810	- -	- -	- -	*—6,926*	–	- -	- -	- -	*—6,926*
1811	- -	751,000	*—29,000*	*—7,006*	–	693,600	25,900	- -	1,434,494
1812	308,000	760,000	- -	503,447	220,000	- -	- -	- -	1,791,447
1813	850,000	130,000	- -	*—6,841*	–	350,000	- -	- -	1,323,159
1814	- -	*—10,000*	- -	*—9,481*	–	*—1,056,925*	- -	- -	*—1,076,406*
1815	150,000	425,000	1,075,000	*—5,005*	125,000	*—222,749*	- -	*—14,318,573*	*—12,771,327*
1816	179,033	183,000	- -	*—274,155*	–	- -	*—2,792,000*	- -	*—2,704,122*
Total Estimated Gain in the 16 Years £.	3,224,933	5,451,000	3,216,000	2,285,111	725,000	1,806,730	3,733,900	*—9,268,573*	11,174,101

GREAT BRITAIN.

VI.—AN ACCOUNT of the Total Net Estimated Annual Gain of Taxes Imposed or Augmented, in each Year from 1801 to 1816 inclusive, after deducting the Estimated Annual Loss of Taxes Remitted or Expired, *as compared with the Net Produce of the Year* 1800; showing the Progressive and Cumulative Gain.

YEARS.	PERMANENT TAXES.					WAR TAXES.	Total.
	Customs.	Excise.	Stamps.	Land and Assessed Taxes.	Post Office.		
	£.	£.	£.	£.	£.	£.	£.
1801	298,000	430,000	584,000	272,713	150,000	*—1,232,196*	502,517
1802	1,298,000	2,430,000	584,000	1,256,243	150,000	*—6,832,196*	*—1,113,953*
1803	1,548,000	2,445,000	804,000	1,420,424	150,000	5,367,804	11,735,228
1804	1,548,000	2,445,000	1,604,000	1,403,676	150,000	6,367,804	13,518,480
1805	1,750,400	3,142,000	1,934,000	1,500,761	380,000	7,517,804	16,224,965
1806	1,750,400	3,212,000	2,000,000	1,991,109	380,000	13,187,804	22,521,313
1807	1,750,400	3,212,000	2,000,000	1,983,805	380,000	13,487,804	22,814,009
1808	1,690,400	3,212,000	2,170,000	2,097,516	380,000	13,487,804	23,037,720
1809	1,737,900	3,212,000	2,170,000	2,091,078	380,000	13,592,804	23,183,782
1810	1,737,900	3,212,000	2,170,000	2,084,152	380,000	13,592,804	23,176,856
1811	1,737,900	3,963,000	2,141,000	2,077,146	380,000	14,312,304	24,611,350
1812	2,045,900	4,723,000	2,141,000	2,580,593	600,000	14,312,304	26,402,797
1813	2,895,900	4,853,000	2,141,000	2,573,752	600,000	14,662,304	27,725,956
1814	2,895,900	4,843,000	2,141,000	2,564,271	600,000	13,605,379	26,649,550
1815	3,045,900	5,268,000	3,216,000	2,559,266	725,000	*—935,943*	13,878,223
1816	3,224,933	5,451,000	3,216,000	2,285,111	725,000	*—3,727,943*	11,174,101
Total Estimated Gain in the 16 Years £.	30,955,833	56,053,000	31,016,000	30,741,616	6,510,000	130,766,445	286,042,894

IRELAND.

(*In British Currency.*)

VII.—AN ACCOUNT of the Net Estimated Annual Gain of Taxes Imposed or Augmented, in each Year from 1801 to 1816 inclusive, after deducting the Estimated Annual Loss from Taxes Remitted or Expired, *as compared with the Net Produce of the preceding Year.*

Note.—The Amount of Estimated Loss, when in Excess of Estimated Gain, is distinguished as —, and by *Italic Figures.*

YEARS.	Customs.	Excise.	Assessed Taxes.	Total of Customs, Excise, and Assessed Taxes.	Stamps.	Post Office.	Total.
	£.	£.	£.	£.	£.	£.	£.
1801 - - -	158,769	103,385	- -	262,154	4,615	4,615	271,384
1802 - - -	72,000	- -	- -	72,000	- -	- -	72,000
1803 - - -	172,615	267,693	- -	440,308	- -	- -	440,308
1804 - - -	426,738	712,385	- -	1,139,123	17,539	- -	1,156,662
1805 - - -	48,231	11,077	99,692	159,000	64,615	18,462	242,077
1806 - - -	75,692	124,616	*—10,000*	190,308	92,308	- -	282,616
1807 - - -	27,692	189,231	36,923	253,846	23,077	- -	276,923
1808 - - -	20,769	307,385	- -	328,154	- -	- -	328,154
1809 - - -	- -	570,462	- -	570,462	- -	- -	570,462
1810 - - -	173,539	*—180,000*	78,461	72,000	27,692	32,308	132,000
1811 - - -	211,385	- -	- -	211,385	- -	- -	211,385
1812 - - -	- -	836,308	- -	836,308	- -	- -	836,308
1813 - - -	221,538	235,385	92,308	549,231	- -	13,846	563,077
1814 - - -	184,615	275,769	- -	460,384	923	4,616	465,923
1815 - - -	76,154	402,692	166,154	645,000	41,539	- -	686,539
1816 - - -	*—11,921*	*—327,925*	*—42,234*	*—382,080*	- -	- -	*—382,080*
Total Net Estimated Gain in the 16 Years - -	£. 1,857,816	3,528,463	421,304	5,807,583	272,308	73,847	6,153,738

IRELAND.

(*In British Currency.*)

VIII.—AN ACCOUNT of the Total Net Estimated Annual Gain of Taxes Imposed or Augmented, in each Year from 1801 to 1816 inclusive, after deducting the Estimated Annual Loss from Taxes Remitted or Expired, *as compared with the Net Produce of the Year* 1800; showing the Progressive and Cumulative Increase.

YEARS.	Customs.	Excise.	Land and Assessed Taxes.	Total of Customs, Excise, and Assessed Taxes.	Stamps.	Post Office.	Total.
	£.	£.	£.	£.	£.	£.	£.
1801 - - -	158,769	103,385	- -	262,154	4,615	4,615	271,384
1802 - - -	230,769	103,385	- -	334,154	4,615	4,615	343,384
1803 - - -	403,384	371,078	- -	774,462	4,615	4,615	783,692
1804 - - -	830,122	1,083,463	- -	1,913,585	22,154	4,615	1,940,354
1805 - - -	878,353	1,094,540	99,692	2,072,585	86,769	23,077	2,182,431
1806 - - -	954,045	1,219,156	89,692	2,262,893	179,077	23,077	2,465,047
1807 - - -	981,737	1,408,387	126,615	2,516,739	202,154	23,077	2,741,970
1808 - - -	1,002,506	1,715,772	126,615	2,844,893	202,154	23,077	3,070,124
1809 - - -	1,002,506	2,286,234	126,615	3,415,355	202,154	23,077	3,640,586
1810 - - -	1,176,045	2,106,234	205,076	3,487,355	229,846	55,385	3,772,586
1811 - - -	1,387,430	2,106,234	205,076	3,698,740	229,846	55,385	3,983,971
1812 - - -	1,387,430	2,942,542	205,076	4,535,048	229,846	55,385	4,820,279
1813 - - -	1,608,968	3,177,927	297,384	5,084,279	229,846	69,231	5,383,356
1814 - - -	1,793,583	3,453,696	297,384	5,544,663	230,769	73,847	5,849,279
1815 - - -	1,869,737	3,856,388	463,538	6,189,663	272,308	73,847	6,535,818
1816 - - -	1,857,816	3,528,463	421,304	5,807,583	272,308	73,847	6,153,738
Total Estimated Gain in the 16 Years -	£. 17,523,200	30,556,884	2,664,067	50,744,151	2,603,076	590,772	53,937,999

GREAT BRITAIN.

IX.—AN ACCOUNT of the Total Net Produce paid into the Exchequer, in each Year from 1800 to 1816 inclusive, under the following Heads of Revenue from Taxation, in which Alterations of the Votes were made by Parliament.

	1800.	1801.	1802.	1803.	1804.	1805.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Customs	5,531,101 19 11	4,881,133 16 6	5,988,583 5 9	6,598,077 3 2	6,852,804 13 6	6,619,431 14 2
Excise	10,832,749 – –	11,260,110 – –	14,644,158 8 10	16,693,998 19 11	14,797,250 16 9	15,991,439 3 11
Stamps	2,644,256 15 9	2,876,726 8 11	3,025,323 4 1	3,177,604 12 6	3,354,322 18 –	3,918,964 2 4
Land and Assessed Taxes	4,302,821 6 3	4,187,541 – –	4,783,047 9 9	5,309,699 8 6	5,309,130 3 9	5,545,887 14 2
Post Office	716,000 – –	827,000 – –	922,000 – –	895,000 – –	924,000 – –	1,057,000 – –
Pre-Union War Taxes:						
War Customs and Arrears	1,232,195 18 11	990,067 – 10	70,093 8 3	5,164 3 11	—	—
Arrears of War Aids and Taxes	530,771 13 10	127,935 11 7	52,125 11 7	18,050 1 –	2,481 10 11	1,010 17 4
Income Duty and Arrears	4,759,317 13 –	5,651,642 19 7	3,232,856 15 8	360,971 1 –	81,048 6 9	48,392 9 6
Post-Union War Taxes:						
War Customs	– – –	– – –	– – –	576,379 10 –	1,505,066 12 2	2,465,026 16 6
War Excise	– – –	– – –	– – –	1,281,375 – –	5,806,892 6 6	6,290,100 – –
Property Tax	– – –	– – –	– – –	16,917 13 –	3,484,351 10 5	4,377,583 12 9
£.	30,549,214 7 8	30,802,156 17 5	32,718,138 3 11	34,933,237 13 –	42,117,348 18 9	46,314,836 10 8

	1806.	1807.	1808.	1809.	1810.	1811.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Customs	7,056,779 1 9	6,476,942 6 4	6,428,972 12 –	7,217,044 15 3	7,718,556 8 9	6,802,402 15 4
Excise	16,990,855 16 5	17,575,683 – –	17,847,897 2 6	16,797,132 – –	18,057,786 15 –	18,489,914 12 4
Stamps	4,132,516 7 11	4,174,555 5 9	4,536,311 19 10	5,124,739 2 6	5,336,455 9 4	5,090,478 11 3
Land and Assessed Taxes	5,815,989 6 6	6,384,750 14 1	6,909,788 16 1	7,863,231 17 5	7,177,897 18 5	6,868,230 8 10
Post Office	1,101,000 – –	1,082,000 – –	1,076,000 – –	1,168,000 – –	1,253,000 – –	1,274,000 – –
Pre-Union War Taxes:						
War Customs	—	—	—	—	—	—
Arrears of War Aids and Taxes	459 6 3	2,888 11 2	—	—	—	—
Arrears of Income Duty	16,383 17 9	23,072 19 –	15,020 11 6	26,043 18 3	11,666 4 10	14,336 5 –
Post-Union War Taxes:						
War Customs	2,677,034 10 4	2,730,792 14 6	2,368,850 17 9	3,072,761 19 11	3,100,594 16 10	2,633,919 – 10
War Excise	6,193,211 16 5	6,232,543 – –	6,802,815 2 6	5,593,265 – –	6,709,985 15 –	6,410,139 17 8
Property Tax	5,983,214 9 6	9,864,189 4 10	11,120,131 10 7	12,134,118 10 8	13,216,863 17 9	12,941,155 5 10
£.	49,967,444 12 10	54,547,417 15 8	57,105,788 12 9	58,996,337 4 –	62,582,807 5 11	60,524,576 17 1

	1812.	1813.	1814.	1815.	1816.	Totals, 1801 to 1816 inclusive (16 years).
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Customs	7,081,417 4 5	7,015,968 19 11	7,615,104 19 5	8,246,069 13 1	7,388,425 10 2	109,987,664 19 6
Excise	17,300,003 3 6	18,039,713 19 3	18,909,535 – –	19,924,106 10 7	18,414,063 15 8	271,733,649 4 8
Stamps	5,078,837 3 11	5,344,486 13 11	5,601,791 2 11	5,869,376 14 5	5,969,724 8 10	72,612,214 6 5
Land and Assessed Taxes	6,985,544 7 10	7,433,496 18 5	7,543,865 4 4	7,299,241 18 7	6,917,170 18 7	102,334,514 5 3
Post Office	1,322,000 – –	1,403,000 – –	1,462,000 – –	1,541,000 – –	1,430,000 – –	18,737,000 – –
Pre-Union War Taxes:						
War Customs	– – –	– – –	– – –	– – –	– – –	1,065,324 13 –
Arrears of War Aids and Taxes	– – –	– – –	– – –	– – –	– – –	204,951 9 10
Arrears of Income Duty	8,199 7 7	1,593 15 5	1,205 4 4	308 5 10	36 – –	9,492,778 2 –
Post-Union War Taxes:						
War Customs	2,948,330 4 2	3,275,358 5 4	3,345,670 18 1	2,280,634 17 8	1,007,810 5 9	33,988,231 9 10
War Excise	5,172,110 3 6	6,073,538 4 6	6,354,541 – –	6,613,526 9 5	4,462,074 15 7	79,996,118 11 1
Property Tax	12,789,778 9 6	13,965,808 7 2	14,218,339 6 8	14,318,573 7 2	11,559,590 17 9	139,990,616 3 7
£.	58,686,220 4 5	62,552,965 3 11	65,052,052 15 9	66,092,837 16 9	57,148,896 12 4	840,143,063 5 2

Note.—The several amounts of Pre-Union War Customs, above specified, as well as the amounts of Post-Union War Customs and Excise, in the years 1803 and 1804, are not specially distinguished as War Taxes in the accounts of Income, as shown in the Finance Accounts for those years, but are there included in the total amount of Customs and Excise Duties, though kept separate in the Exchequer Books, as directed by the several Acts.

GREAT BRITAIN.

X.—AN ACCOUNT of the Total Increase of the Actual Net Produce of Taxes subjected to Alteration of Rates, in each of the Sixteen Years from 1801 to 1816 inclusive, *as compared with the Actual Net Produce of such Taxes in the Year* 1800; showing the Progressive and Cumulative Increase.

Note.—When there is a Decrease, as compared with 1800, the Amount is distinguished as —, and by *Italic Figures.*

YEARS.	PERMANENT TAXES.					WAR TAXES.	TOTAL.
	Customs.	Excise.	Stamps.	Land and Assessed Taxes.	Post Office.		
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£.	£. s. d.	£. s. d.
1801	*—649,968 3 5*	427,361 – –	232,469 13 2	*—115,280 6 3*	111,000	247,360 6 3	252,942 9 9
1802	457,431 5 10	3,811,409 8 10	381,066 8 4	420,226 3 6	206,000	*—3,167,209 10 3*	2,108,923 16 3
1803	1,066,975 3 3	5,861,249 19 11	533,347 16 9	1,006,878 2 3	179,000	*—4,263,427 16 10*	4,384,023 5 4
1804	1,321,702 13 7	3,964,501 16 9	710,066 2 3	1,006,308 17 6	208,000	4,357,555 1 –	11,568,134 11 1
1805	1,088,329 14 3	5,158,690 3 11	1,274,707 6 7	1,243,066 7 11	341,000	6,659,828 10 4	15,765,622 3 –
1806	1,525,677 1 10	6,158,106 16 5	1,488,259 12 2	1,513,168 – 3	385,000	8,348,018 14 6	19,418,230 5 2
1807	945,840 6 5	6,742,934 – –	1,530,298 10 –	2,081,929 7 10	366,000	12,331,201 3 9	23,998,203 8 –
1808	897,870 12 1	7,015,148 2 6	1,892,055 4 1	2,606,967 9 10	360,000	13,784,532 16 7	26,556,574 5 1
1809	1,685,942 15 4	5,964,383 – –	2,480,482 6 9	3,560,410 11 2	452,000	14,303,904 3 1	28,447,122 16 4
1810	2,187,454 8 10	7,225,037 15 –	2,692,198 13 7	2,875,076 12 2	537,000	16,516,825 8 8	32,033,592 18 3
1811	1,271,300 15 5	7,657,165 12 4	2,446,221 15 6	2,565,409 2 7	558,000	15,477,265 3 7	29,975,362 9 5
1812	1,550,315 4 6	6,467,254 3 6	2,434,580 8 2	2,682,723 1 7	606,000	14,396,132 19 –	28,137,005 16 9
1813	1,484,867 – –	7,206,964 19 3	2,700,229 18 2	3,130,675 12 2	687,000	16,794,013 6 8	32,003,750 16 3
1814	2,084,002 19 6	8,076,786 – –	2,957,534 7 2	3,241,043 18 1	746,000	17,397,471 3 4	34,502,838 8 1
1815	2,714,967 13 2	9,091,357 10 7	3,225,119 18 8	2,996,420 12 4	825,000	16,690,757 14 4	35,543,623 9 1
1816	1,857,323 10 3	7,581,314 15 8	3,325,467 13 1	2,614,349 12 4	714,000	10,507,226 13 4	26,599,682 4 8
TOTAL Actual Increase in the 16 Years £.	21,490,033 – 10	98,409,665 4 8	30,304,105 14 5	33,429,373 5 3	7,281,000	160,381,455 17 4	351,295,633 2 6

IRELAND.

(*In British Currency.*)

XI.—AN ACCOUNT of the Total Net Produce paid into the Exchequer, in each Year from 1800 to 1816 inclusive, under the following Heads of Revenue from Taxation, in which Alterations of the Rates were made by Parliament.

YEARS.	Customs, Excise, and Taxes.	Stamps.	Postage.	TOTAL.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.
1800	2,158,021 9 11	133,333 – 1	22,915 3 2	2,314,269 13 2
1801	1,973,395 4 11	173,117 13 11	25,976 12 3	2,172,489 11 1
1802	2,800,821 12 3	169,031 – 6	37,547 10 1	3,007,400 2 10
1803	2,345,174 17 7	168,505 6 2	23,370 18 2	2,537,051 1 11
1804	2,622,268 1 11	316,526 10 8	38,893 17 6	2,977,688 10 1
1805	2,595,983 15 6	421,417 8 11	54,451 5 2	3,071,852 9 7
1806	2,990,904 6 10	477,176 17 11	50,376 7 –	3,518,457 11 9
1807	3,457,224 2 7	521,192 2 4	65,901 2 –	4,044,317 6 11
1808	3,590,514 8 8	533,058 13 10	63,600 3 1	4,187,173 5 7
1809	3,296,496 12 6	569,678 7 3	53,049 11 2	3,919,224 10 11
1810	2,656,023 5 6	562,916 11 2	77,538 9 3	3,296,478 5 11
1811	3,128,597 17 7	613,434 14 –	77,538 9 3	3,819,571 – 10
1812	3,783,527 15 7	627,031 17 10	79,384 12 4	4,489,944 5 9
1813	3,876,579 1 3	668,633 10 10	88,615 7 8	4,633,827 19 9
1814	4,335,560 7 10	645,577 10 8	82,153 16 11	5,063,291 15 5
1815	4,700,156 16 8	504,290 16 6	73,384 12 4	5,277,832 5 6
1816	3,620,995 1 8	502,444 18 2	72,000 – –	4,195,439 19 10
TOTAL Actual Net Produce in the 16 Years £.	51,774,223 8 10	7,474,034 – 8	963,782 14 2	60,212,040 3 8

IRELAND.

(*In British Currency.*)

XII.—AN ACCOUNT of the Total Increase of the Actual Net Produce of Taxes, subjected to Alteration of Rates, in each of the Sixteen Years from 1801 to 1816 inclusive, *as compared with the Actual Net Produce of such Taxes in the Year* 1800; showing the Progressive and Cumulative Increase.

Note.—When there is a Decrease, as compared with 1800, the Amount is distinguished as —, and by *Italic Figures.*

YEARS.	Customs, Excise, and Taxes.	Stamps.	Postage.	TOTAL.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.
1801 - - - -	*—184,626 5 –*	39,784 13 10	3,061 9 1	*—141,780 2 1*
1802 - - - -	642,800 2 4	35,698 – 5	14,632 6 11	693,130 9 8
1803 - - - -	187,153 7 8	35,172 6 1	455 15 –	222,781 8 9
1804 - - - -	464,246 12 –	183,193 10 7	15,978 14 4	663,418 16 11
1805 - - - -	437,962 5 7	288,084 8 10	31,536 2 –	757,582 16 5
1806 - - - -	832,882 16 11	343,843 17 10	27,461 3 10	1,204,187 18 7
1807 - - - -	1,299,202 12 8	387,859 2 3	42,985 18 10	1,730,047 13 9
1808 - - - -	1,432,492 18 9	399,725 13 9	40,684 19 11	1,872,903 12 5
1809 - - - -	1,138,475 2 7	436,345 7 2	30,134 8 –	1,604,954 17 9
1810 - - - -	498,001 15 7	429,583 11 1	54,623 6 1	982,208 12 9
1811 - - - -	970,576 7 8	480,101 13 11	54,623 6 1	1,505,301 7 8
1812 - - - -	1,625,506 5 8	493,698 17 9	56,469 9 2	2,175,674 12 7
1813 - - - -	1,718,557 11 4	535,300 10 9	65,700 4 6	2,319,558 6 7
1814 - - - -	2,177,538 17 11	512,244 10 7	59,238 13 9	2,749,022 2 3
1815 - - - -	2,542,135 6 9	370,957 16 5	50,469 9 2	2,963,562 12 4
1816 - - - -	1,462,973 11 9	369,111 18 1	49,084 16 10	1,881,170 6 8
TOTAL Actual Increase in the 16 Years - - £.	17,245,879 10 2	5,340,705 19 4	597,140 3 6	23,183,725 13 –

XIII.—AN ACCOUNT of the Proportion of Increase of the Revenue of *Great Britain* and *Ireland* respectively, for the whole Period, from 1801 to 1816 inclusive, arising from—

1. The Total Net Estimated Gain, prospectively calculated, from Taxes Imposed or Augmented, after deducting the Estimated Loss from Taxes Remitted or Expired;
2. The Total Increase of the Actual Net Produce of Taxes subjected to Alteration of Rates;
3. The Total Increase of the Actual Gross Produce of such Taxes.

The Proportions of the relative Increase of each Country are shown, as well as the Proportions of Increase, as compared with the following Proportionate Amounts of the Total Produce of such Taxes, in the Year 1800; viz.:—

	Amount.	Proportion per Cent.
Net Produce:—	£.	
Great Britain	30,549,214	93·
Ireland	2,314,270	7·
TOTAL £.	32,863,484	100·
Gross Produce:		
Great Britain	33,053,961	92·3
Ireland	2,755,837	7·7
TOTAL £.	35,809,798	100·

In the 16 Years, from 1801 to 1816 inclusive:	AMOUNT.	Relative Proportion of each Country.		Proportion of Actual Increase of each Country, as compared with 1800.	
		Proportion per Cent.	Proportion of Great Britain to Ireland's Proportion of Contribution, under the Act of Union.*	Proportion per Cent. of Total Increase.	Proportion per Cent. of Average Annual Increase.
1. Total Net Estimated Gain, prospectively calculated, from Taxes Imposed or Augmented, after deducting the Estimated Loss from Taxes Remitted or Expired:	£.				
Great Britain	286,042,894	84·1	10·6	936·	58·5
Ireland	53,937,999	15·9	2·	2,331·	146·
TOTAL	339,980,893	100·			
2. Total Increase of the Actual Net Produce of Taxes subjected to Alterations of Rates:					
Great Britain	351,295,633	93·8	30·2	1,149·	71·8
Ireland	23,183,726	6·2	2·	1,001·	62·6
TOTAL	374,479,359	100·			
3. Total Increase of the Actual Gross Produce† of Taxes subjected to Alterations of Rates:					
Great Britain	373,074,742	92·8	25·8	1,128·	70·5
Ireland	29,084,914	7·2	2·	1,055·	66·
TOTAL	402,159,656	100·			

* The relative proportions of the Contributions of Great Britain and Ireland respectively, under the Act of Union, towards the Joint Expenditure being as 15 to 2, are equivalent to 88·235 and 11·765 per cent.

† The Total Increase of the *Actual Net Produce* has been shown in the preceding Accounts, for the purpose of comparison with the *Estimated Net Gain*. In order to show the Total Increase of the *Actual Gross Produce*, the Increase of the Total Revenue expended in progress to the Exchequer may be added, as follows:—

	GREAT BRITAIN.	IRELAND.
	£.	£.
Gross Revenue paid for Charges of Collection, from 1801 to 1816 inclusive	44,920,474	10,278,978
Ditto other Payments for National Objects, including Bounties	16,871,392	2,687,287
TOTAL in the 16 Years	61,791,866	12,966,265
(*See* full details of these payments for each year, pp. 344–5 of Appendix to Report of Irish Taxation Committee, 1864.)		
Deduct,—Similar Gross Revenue in 1800; viz.:		
Great Britain £.	2,504,547	
Ireland (calculated from the Amount in the Three Quarters to 25 December 1800)	441,567	
From each of the 16 years, amounting in the whole to	40,072,757	7,065,077
TOTAL Increase of Gross Revenue, beyond Net Revenue	21,719,109	5,901,188
Add,—Total Increase of Net Revenue	351,355,633	23,183,726
TOTAL INCREASE of GROSS REVENUE £.	373,074,742	29,084,914

II.—ACCOUNT of the Amount of Taxes Remitted in *Great Britain* and *Ireland* respectively, in each Year, from 1816 to 1864 inclusive; showing also the Proportion of Remission to each Country up to the Year 1864.

Note.—The successive alterations of the Corn Laws are excluded from this Return of Customs Duties, in conformity with the rule which has been followed in all similar statements heretofore rendered to Parliament; the Duties chargeable on Corn previously to 1849 having been adapted to other than fiscal objects, fluctuating in their rates, and dependent as to their productiveness on contingencies which placed them entirely beyond the range of any calculation *à priori*. (Return, No. 511, of Session 1858, p. 34.)

GREAT BRITAIN.

YEARS.	Customs Duties on Imports, Exports, and Goods carried Coastwise.	Excise, exclusive of Duties on Foreign Produce.	Stamps.	Assessed Taxes.	Property and Income Tax.	Post Office.	Total.
	£.	£.	£.	£.	£.	£.	£.
1816	40,967	2,809,000	- -	270,670	- -	- -	3,120,637
1817	- -	4,000	- -	31,631	- -	- -	35,631
1818	- -	9,000	- -	504	- -	- -	9,504
1819	465,162	14,000	- -	24,231	- -	25,000	528,393
1820	- -	4,000	- -	- -	- -	- -	4,000
1821	19,448	- -	- -	- -	- -	- -	19,448
1822	152,963	1,659,000	- -	451,804	- -	- -	2,263,267
1823	118,861	1,429,000	- -	2,220,063	- -	- -	3,767,924
1824	1,335,411	- -	177,100	11,935	- -	- -	1,524,446
1825	2,491,489	536,000	60,840	267,162	- -	- -	3,355,491
1826	758,713	1,134,000	66,400	- -	- -	- -	1,959,113
1827	1,738	- -	2,300	- -	- -	66,802	70,840
1828	36,213	- -	12,313	- -	- -	- -	48,526
1829	119,130	- -	- -	- -	- -	- -	119,130
1830	518,974	3,447,000	- -	13,272	- -	- -	3,979,246
1831	982,385	528,700	- -	2,940	- -	25,000	1,539,025
1832	239,423	475,200	1,134	42,880	- -	- -	758,637
1833	345,592	626,000	147,180	402,588	- -	- -	1,521,360
1834	301,258	97,100	27,700	1,222,295	- -	- -	1,648,353
1835	31,121	119,000	cannot be estimated	- -	- -	14,000	164,121
1836	137,177	492,000	294,800	- -	- -	- -	923,977
1837	234	- -	- -	- -	- -	- -	234
1838	289	- -	cannot be estimated	- -	- -	- -	289
1839	4,950	2,000	56,308	- -	- -	160	63,418
1840	- -	- -	- -	13,959	- -	1,114,461	1,128,420
1841	27,118	- -	cannot be estimated	- -	- -	- -	27,118
1842	1,429,220	- -	88,422	- -	- -	- -	1,517,642
1843	165,096	- -	- -	- -	- -	- -	165,096
1844	282,467	67,000	101,959	- -	- -	- -	451,426
1845	3,391,746	915,000	- -	- -	- -	- -	4,306,746
1846	730,418	- -	- -	- -	- -	- -	730,418
1847	328,823	- -	- -	- -	- -	- -	328,823
1848	544,362	- -	- -	- -	- -	- -	544,362
1849	359,989	- -	- -	- -	- -	- -	359,989
1850	309,760	456,000	500,000	- -	- -	- -	1,265,760
1851	763,261	- -	- -	1,878,800	- -	- -	2,642,061
1852	93,287	- -	- -	- -	- -	- -	93,287
1853	1,366,783	1,195,000	254,000	- -	- -	- -	2,815,783
1854	852,570	- -	160,000	290,000	- -	- -	1,302,570
1855	2,301	60,000	300,000	- -	- -	- -	362,301
1856	3,367	2,125,000	- -	- -	- -	- -	2,128,367
1857	1,452,772	- -	- -	- -	8,430,000	- -	9,882,772
1858	- -	- -	- -	- -	1,934,000	- -	1,934,000
1859	—	—	—	—	—	—	—
1860	2,737,668	105,000	- -	- -	- -	- -	2,842,668
1861	258,693	1,290,000	- -	- -	986,000	- -	2,534,693
1862	97,463	250,000	5,000	- -	- -	- -	352,463
1863	1,670,285	- -	- -	- -	2,558,000	- -	4,228,285
1864	1,710,790	13,000	243,000	- -	1,143,000	- -	3,109,790
£.	26,679,737	19,861,000	2,498,456	7,144,234	15,051,000	1,245,423	72,479,850

The amount remitted is computed upon the actual net produce in the preceding year of the tax remitted or reduced. Full details of the taxes so remitted will be found in the following Parliamentary Returns, from which, so far as they extend, the above stated amounts are taken. The Return, No. 511, of Session 1858, shows in detail all the remissions of taxation *in the United Kingdom*, from 1800 to 1858, both inclusive, and the estimated *net* annual loss by such remission. The Return, No. 190, of Session 1834, shows in like manner the remissions of taxation in Great Britain and in Ireland respectively, from 1814 to 1833 inclusive, and the annual loss by such remission. It also specifies the net receipt upon each such tax for each of the five years next preceding its remission. The Return, No. 573, of Session 1843, shows also the remissions of taxation in Great Britain and in Ireland respectively, from 1814 to 1842 inclusive, together with the estimated annual loss, but *computed upon the average produce of each tax during the five years next preceding such remission*, in obedience to the terms of the Order. The Returns, No. 305, of Session 1842, No. 652, of Session 1845, and No. 461, of Session 1854, are in continuation of the Return, No. 190, of 1834.

Amount of Taxes Remitted in *Great Britain* and *Ireland*, from 1816 to 1864, &c.—*continued*.

IRELAND.

YEARS.	Customs.	Excise.	Stamps.	Assessed Taxes.	Property and Income Tax.	Post Office.	TOTAL.
	£.	£.	£.	£.	£.	£.	£.
1816	11,921	327,925	-	42,234	-	-	382,080
1817	864	-	-	-	-	-	864
1818	—	—	—	—	—	—	—
1819	7,113	-	23,920	171,420	-	-	202,453
1820	—	—	—	—	—	—	—
1821	484	-	73	-	-	-	557
1822	183	86,000	2,955	238,000	-	-	327,138
1823	92,246	27,000	-	163,080	-	-	282,326
1824	82,824	-	97,454	-	-	-	180,278
1825	276,180	-	7,880	-	-	-	284,060
1826	14,499	-	-	-	-	-	14,499
1827	-	-	-	-	-	13,198	13,198
1828	114	-	3,358	-	-	-	3,472
1829	7,276	-	-	-	-	-	7,276
1830	55,709	59,000	-	-	-	-	114,709
1831	84,211	300	-	-	-	-	84,511
1832	8,323	1,300	6,028	-	-	-	15,651
1833	1,148	-	9,620	-	-	-	10,768
1834	4,559	408,100	3,504	-	-	-	416,163
1835	756	12,000	-	-	-	-	12,756
1836	5,939	44,500	15,370	-	-	-	65,809
1837	—	—	—	—	—	—	—
1838	—	—	—	—	—	—	—
1839	—	—	—	—	—	—	—
1840	-	-	5,000	-	-	125,539	130,539
1841	52	-	-	-	-	-	52
1842	69,724	-	-	-	-	-	69,724
1843	6,425	240,000	-	-	-	-	246,425
1844	3,964	3,000	-	-	-	-	6,964
1845	211,815	18,000	-	-	-	-	229,815
1846	4,810	-	-	-	-	-	4,810
1847	16,063	-	-	-	-	-	16,063
1848	41,606	-	-	-	-	-	41,606
1849	28,809	-	-	-	-	-	28,809
1850	24,391	-	20,000	-	-	-	44,391
1851	37,803	-	-	-	-	-	37,803
1852	2,641	-	-	-	-	-	2,641
1853	132,691	-	23,000	-	-	-	155,691
1854	130,537	-	-	-	-	-	130,537
1855	659	-	-	-	-	-	659
1856	108	75,000	-	-	-	-	75,108
1857	175,810	-	-	-	695,000	-	870,810
1858	-	-	-	-	166,000	-	166,000
1859	—	—	—	—	—	—	—
1860	103,263	-	-	-	-	-	103,263
1861	20,865	60,000	-	-	74,000	-	154,865
1862	1,208	-	-	-	-	-	1,208
1863	226,034	-	-	-	192,000	-	418,034
1864	33,594	2,000	12,000	-	87,000	-	134,594
£.	1,927,221	1,364,125	230,162	614,734	1,214,000	138,737	5,488,979

PROPORTION of REMISSION of TAXATION, from 1816 to 1864 inclusive.

	Amount.	Proportion per Cent.	Relative Proportion of Great Britain to Ireland's Proportion of Contribution under the Act of Union.
	£.		
Great Britain	72,479,850	93·	26·5
Ireland	5,488,979	7·	2·
TOTAL	77,968,829	100·	28·5

Exchequer, 2 March 1865.

H. W. Chisholm, Chief Clerk.

III.—ACCOUNT showing the Estimated Amount of TAXES IMPOSED in *Great Britain* and *Ireland* respectively, in each Year from 1816 to 1864 inclusive; showing also the Proportion of Addition to the Taxation of each Country up to the Year 1864.

(From separate Returns furnished by the Customs and Inland Revenue Departments.)

GREAT BRITAIN.

—	Customs Duties on Imports, Exports, and Goods brought Coastways.	Excise.	Stamps.	Assessed Taxes.	Property and Income Tax.	Post Office.	TOTAL.
	£.	£.	£.	£.	£.		£.
1816	78,682	230,000	-	-	-	The various alterations which have taken place in the Rates of Postage in Ireland are so much blended with those which have been made in Great Britain, that it is not possible to give separate Returns for the two Countries. (*See* Return, No. 305, of Session 1842, p. 18.)	308,682
1817	-	1,300	-	-	-		1,300
1818	-	-	-	-	-		—
1819	1,050,432	1,834,000	-	-	-		2,884,432
1820	-	-	-	-	-		—
1821	-	-	-	-	-		—
1822	-	-	-	-	-		—
1823	-	3,800	-	-	-		3,800
1824	26,628	-	-	-	-		26,628
1825	-	-	-	-	-		—
1826	188,613	75,000	-	-	-		263,613
1827	8,712	-	-	-	-		8,712
1828	1,956	-	-	-	-		1,956
1829	-	-	-	-	-		—
1830	84,472	391,000	-	-	-		475,472
1831	601,272	-	210	1,170	-		602,652
1832	22,976	-	21,550	-	-		44,526
1833	-	-	-	-	-		—
1834	17,394	142,000	-	-	-		159,394
1835	75	-	-	-	-		75
1836	797	800	-	2,394	-		3,991
1837	-	100	-	-	-		100
1838	-	-	1,733	-	-		1,733
1839	-	-	-	-	-		—
1840	959,401	614,000	-	311,447	-		1,884,848
1841	-	-	-	-	-		—
1842	160,564	700	1,825	-	5,100,000		5,263,089
1843	-	-	-	-	-		—
1844	-	-	-	-	-		—
1845	-	17,500	4,720	-	-		22,220
1846	1,930	120	-	-	-		2,050
1847	-	-	-	-	-		—
1848	-	80	-	-	-		80
1849	-	-	-	-	-		—
1850	-	-	-	-	-		—
1851	-	150	-	600,000	-		600,150
1852	-	-	-	-	-		—
1853	10,892	320,000	1,790,000	-	290,000		2,410,892
1854	403,835	2,635,450	-	-	6,134,000		9,173,285
1855	2,024,115	670,084	-	-	1,855,000		4,549,199
1856	-	-	-	-	-		—
1857	92	-	-	-	-		92
1858	-	-	153,700	-	-		153,700
1859	-	-	-	-	4,025,000		4,025,000
1860	563,657	795,000*	163,000	-	983,000		2,504,657
1861	15,000	4,500	60,000	-	-		79,500
1862	-	216,700	20,500	-	-		237,200
1863	6,811	21,500	-	-	-		28,311
1864	-	8,500	-	-	-		8,500
£.	6,228,306	7,982,284	2,217,238	915,011	18,387,000	-	35,729,839

* In this sum of 795,000 *l.* is included 150,000 *l.*, duty on game certificates, transferred to excise from taxes with altered rates. The estimated amount transferred being 140,000 *l.*, the net addition is 10,000 *l.* only.

Amount of Taxes Imposed in *Great Britain* and *Ireland*, from 1816 to 1864—*continued*.

IRELAND.

	Customs Duties on Imports, Exports, and Goods brought Coastways.	Excise.	Stamps.	Assessed Taxes.	Property and Income Tax.	Post Office.	Total.
	£.	£.	£.	£.	£.		£.
1816	10,976	- -	400	- -	- -	- -	11,376
1817	6,691	- -	- -	- -	- -	- -	6,691
1818	56	1,300	- -	- -	- -	- -	1,356
1819	87,470	- -	- -	- -	- -	- -	87,470
1820	4,602	115,000	- -	- -	- -	- -	119,602
1821	- -	- -	42,642	- -	- -	- -	42,642
1822	- -	- -	- -	- -	- -	- -	—
1823	- -	- -	14,796	- -	- -	- -	14,796
1824	18,977	- -	- -	- -	- -	- -	18,977
1825	- -	43,000	- -	- -	- -	- -	43,000
1826	112	125,000	- -	- -	- -	- -	125,112
1827	12,690	- -	- -	- -	- -	- -	12,690
1828	7	- -	- -	- -	- -	- -	7
1829	- -	- -	- -	- -	- -	- -	—
1830	532	220,000	- -	- -	- -	- -	220,532
1831	24,934	- -	- -	- -	- -	- -	24,934
1832	- -	- -	- -	- -	- -	- -	—
1833	- -	- -	- -	- -	- -	- -	—
1834	- -	39,000	- -	- -	- -	- -	39,000
1835	- -	- -	- -	- -	- -	- -	—
1836	- -	- -	- -	- -	- -	- -	—
1837	- -	- -	- -	- -	- -	- -	—
1838	- -	- -	- -	- -	- -	- -	—
1839	- -	- -	- -	- -	- -	- -	—
1840	100,825	170,000	- -	- -	- -	*See* Note in Page 198.	270,825
1841	- -	- -	- -	- -	- -		—
1842	258	240,300	126,342	- -	- -	- -	366,900
1843	- -	- -	- -	- -	- -	- -	—
1844	- -	- -	- -	- -	- -	- -	—
1845	- -	1,500	- -	- -	- -	- -	1,500
1846	70	- -	- -	- -	- -	- -	70
1847	- -	- -	- -	- -	- -	- -	—
1848	- -	4	- -	- -	- -	- -	4
1849	- -	- -	- -	- -	- -	- -	—
1850	- -	- -	4,300	- -	- -	- -	4,300
1851	- -	- -	18,000	- -	- -	- -	18,000
1852	- -	- -	- -	- -	- -	- -	—
1853	5,491	270,000	244,000	- -	460,000	- -	979,491
1854	36,808	265,000	- -	- -	480,000	- -	781,808
1855	201,792	330,021	- -	- -	145,000	- -	676,813
1856	- -	- -	- -	- -	- -	- -	—
1857	- -	- -	- -	- -	- -	- -	—
1858	9,080	280,000	14,000	- -	- -	- -	303,080
1859	- -	- -	- -	- -	315,000	- -	315,000
1860	14,247	385,000	- -	- -	77,000	- -	476,247
1861	- -	500	- -	- -	- -	- -	500
1862	- -	15,300	- -	- -	- -	- -	15,300
1863	- -	2,500	- -	- -	- -	- -	2,500
1864	- -	500	- -	- -	- -	- -	500
£.	535,618	2,503,925	464,480	- -	1,477,000	- -	4,981,023

Proportion of Amount of Taxes Imposed from 1816 to 1864.

	Amount.	Proportion per Cent.	Relative Proportion of Great Britain to Ireland's Proportion of Contribution under the Act of Union.
	£.		
Great Britain - -	35,729,839	87·76	- - - 14·3
Ireland - - -	4,981,023	12·24	- - - 2·
Total - - - £.	40,710,862	100·	

Exchequer, 12 May 1865.

H. W. Chisholm, Chief Clerk.

REFORM CLUB PALL MALL

Appendix, No. 17.

(Reprinted from Return, No. 257, of Session 1865.)

App. No. 17.

EXCISE AND CUSTOMS (IRELAND).

AN ACCOUNT of the Quantities of the following ARTICLES retained for Home Consumption in *Ireland*, in the Year ended the 31st day of December 1864, viz. :— Wine, Spirits (Foreign and Home-made), Tobacco, Tea, Coffee, Sugar, Flax Seed, Cotton Yarn, Cotton Wool, Woollen and Worsted Yarn, Silk (Raw and Thrown), Iron Unwrought, Timber, and Deals:

Of the Quantities of the following ARTICLES Exported from *Ireland* in the Year ended the 31st day of December 1864, distinguishing the Exports to *Great Britain* from those to Foreign Countries, viz. :—Oxen, Sheep, Swine, Horses, Bacon and Hams, Beef and Pork, Butter, Wheat and Wheat Flour, Oats and Oatmeal, Irish Spirits, Linen Manufactures, Linen Yarn, and Cotton Manufactures (in continuation of Parliamentary Paper, No. 53, of the present Session).

Of all ARTICLES Imported into *Ireland* from Foreign Countries and the British Possessions Abroad, during the Year ended 31st day of December 1864, showing the Computed Value of each, and their Total Amount:

Of all ARTICLES Exported from *Ireland* to Foreign Countries and the British Possessions Abroad, with the Declared or Computed Value of each, and their Total Amount:

Of the Quantities of CORN and MEAL, whether of Native or of Foreign Growth, distinguishing the several Sorts Imported into *Ireland* from *Great Britain*, in the Year ended 31st day of December 1864, with the Computed Value thereof:

Of CORN and MEAL Exported from *Ireland* to *Great Britain* (in continuation of Parliamentary Paper, No. 217, of Session 1864).

ACCOUNT of the Quantities of the following ARTICLES retained for Home Consumption in *Ireland*, in the Year ended the 31st day of December 1864; viz., Wine, Spirits (Foreign and Home-made), Tobacco, Tea, Coffee, Sugar, Flax Seed, Cotton Yarn, Cotton Wool, Woollen and Worsted Yarn, Silk (Raw and Thrown), Iron Unwrought, Timber and Deals.

	QUANTITIES RETAINED FOR HOME CONSUMPTION IN IRELAND.																
	Wine, of all Sorts.	SPIRITS.			Tobacco.	Tea.	Coffee.	SUGAR.			Flax Seed and Linseed.	Cotton Yarn.	Cotton Wool.	Woollen and Worsted Yarn.	Silk, Raw and Thrown.	Iron Unwrought (Foreign).	Timber, not Sawn or Split.	Timber, Sawn or Split (Deals, Battens, &c.)
		Foreign, of all Sorts.	Home-made.	TOTAL.				Raw.	Foreign, Refined.	TOTAL.								
	Gallons.	*Gallons.*	*Gallons.*	*Gallons.*	*Lbs.*	*Lbs.*	*Lbs.*	*Cwt.*	*Cwt.*	*Cwt.*	*Bushels.*	*Lbs.*	*Lbs.*	*Lbs.*	*Lbs.*	*Tons.*	*Loads.*	*Loads.*
Year ended 31 December 1864 -	939,391	198,873	4,844,999	5,043,872	6,660,934	11,757,383	593,926	56,683	62,653	119,336	537,912	–	8,176	–	–	81	65,729	117,583

Note.—The view which this Statement affords of the consumption of imported commodities in Ireland is of necessity defective, inasmuch, as the coasting regulations by which the cross Channel trade has been governed since the year 1825, prevent the keeping of any record of goods imported duty-free from Great Britain, either in the case of British productions or of Foreign merchandise.

ACCOUNT of the Quantities of the following ARTICLES Exported from *Ireland* in the Year ended the 31st day of December 1864, distinguishing the Exports to *Great Britain* from those to Foreign Countries; viz., Oxen, Sheep, Swine, Horses, Bacon and Hams, Beef and Pork, Butter, Wheat and Wheat Flour, Oats and Oatmeal, Irish Spirits, Linen Manufactures, Linen Yarn, and Cotton Manufactures.

	QUANTITIES EXPORTED FROM IRELAND TO FOREIGN PARTS.														
	Oxen, Bulls, and Cows.	Sheep.	Swine.	Horses.	Bacon and Hams.	Beef and Pork.	Butter.	Wheat and Wheat Flour.	Oats and Oatmeal.	Irish Spirits.	Linen Manufactures		Linen Yarn.	Cotton Manufactures	
											Entered by the Yard.	Entered otherwise than by the Yard.		Entered by the Yard.	Entered otherwise than by the Yard.
	No.	*No.*	*No.*	*No.*	*Cwt.*	*Cwt.*	*Cwt.*	*Qrs.*	*Qrs.*	*Gallons.*	*Yards.*	*Value.* £.	*Lbs.*	*Yards.*	*Value.* £.
Year ended 31 December 1864 -	2	- -	6	20	136	447	20,913	37	25,052	66,732	142,241	632	–	182,780	525

	QUANTITIES EXPORTED FROM IRELAND TO GREAT BRITAIN.						
	Neat Cattle.		Sheep.	Swine.	Wheat and Wheat Flour (of Irish growth).	Oats and Oatmeal (of Irish growth).	Home-made Spirits (as Registered by the Inland Revenue Department).
	Oxen, Bulls, and Cows.	Calves.					
	No.	*No.*	*No.*	*No.*	*Qrs.*	*Qrs.*	*Gallons.*
Year ended 31 December 1864 -	329,210	19,076	370,781	338,543	41,494	1,720,461	1,145,744

Note.—The latter section of the foregoing Return, exhibiting the exports from Ireland to Great Britain, is of necessity defective. It shows the exportations of wheat and oats (both grain and meal), and of Irish spirits, on the authority of official records; while the exportations of live stock are stated on the credit of non-official documents collected by the officers of Customs at the respective ports of shipment. The documents in question do not comprehend the other articles specified in the Order of the Honourable House.

Office of the Inspector General of Imports and Exports,
Custom House, London, 2 May 1865.

John A. Messenger.

App. No. 17.

ACCOUNT of all ARTICLES Imported into *Ireland* from Foreign Countries and the British Possessions Abroad, during the Year ended 31st December 1864, showing the Computed Value of each, and their Total Amount.

IMPORTS into *Ireland* from Foreign Countries and British Possessions Abroad.

ARTICLES.		YEAR 1864.	
		Quantities Imported.	Computed Real Value.
			£.
Alkali:			
Barilla	*Cwts.*	22,335	9,027
Ashes, Pearl and Pot	,,	170	265
Almonds, Sweet	,,	177	881
Alum	,,	200	58
Animals, Living: Oxen and Bulls	*Number*	794	13,462
Apples, Raw	*Bushels*	5,914	1,490
Asphaltum	*Tons*	—	—
Bacon and Hams	*Cwts.*	33,720	68,141
Bark:			
For Tanners' or Dyers' use	,,	33,117	13,495
Peruvian	,,	—	—
Basket Rods	*Tons*	22	172
Beef, salted	*Cwts.*	12,236	18,201
Berries, Yellow	,,	—	—
Bones of Animals and Fish	*Tons*	597	3,408
Books	*Cwts.*	4	46
Bran and Pollard	,,	3,958	990
Brimstone	,,	400	148
Butter	,,	—	—
Canes, unenumerated	*Number*	37,175	180
Cheese	*Cwts.*	195	508
Chicory, Raw	,,	—	—
Cochineal	,,	—	—
Cocoa Husks and Shells	,,	7,344	3,886
Copper Ore	*Tons*	260	4,680
Copperas, Green	,,	10	28
Cork	,,	192	6,240
Corks, ready made	*Lbs.*	6,290	341
Corn:			
Wheat	*Cwts.*	4,870,989	2,175,352
Barley	,,	148,085	46,249
Oats	,,	—	—
Rye	,,	—	—
Peas	,,	1,314	527
Beans	,,	—	—
Indian Corn	,,	2,080,178	654,008
Buckwheat	,,	—	—
Wheat Meal or Flour	,,	252,893	163,255
Cotton, Raw	,,	73	929
Cotton Manufactures	*Value*	-	1
Cream of Tartar	*Cwts.*	174	948
Currants	,,	210	198
Divi-divi	*Tons*	—	—
Feathers, for Beds	*Cwts.*	67	657
Figs	,,	404	596
Fig Cake	,,	—	—
Fish:			
Cod	,,	25,637	20,935
Herrings	,,	18,777	9,076
Salmon	,,	4	10
Unenumerated	*Value*	-	71
Flax:			
Undressed	*Cwts.*	33,890	90,232
Tow and Codilla of	,,	1,054	2,648
Frames for Pictures	*Value*	-	237
Fustic	*Tons*	—	—
Glass:			
Window	*Cwts.*	2,832	2,266
Plate	*Lbs.*	1,680	70
Of other kinds	*Value*	-	89
Grapes	*Bushels*	431	309
Guano	*Tons*	22,239	264,999
Gypsum	,,	—	—
Hair, Horse	*Cwts.*	—	—

App. No. 17.

IMPORTS into *Ireland* from Foreign Countries and British Possessions Abroad—*continued.*

ARTICLES.		YEAR 1864...	
		Quantities Imported.	Computed Real Value.
			£.
Hemp:			
Dressed	*Cwts.*	2,670	6,308
Undressed	„	17,183	28,495
Tow and Codilla of	„	5	8
Hides:			
Not tanned	„	18	63
Tanned, tawed, or in any way dressed	*Lbs.*	5,400	433
Hops	*Cwts.*	—	—
Horns, Horn Tips, and Pieces of Horn	*Tons*	52	936
Ice	„	5,142	4,628
Iron, in bars	„	81	927
Iron and steel, wrought or manufactured	*Cwts.*	2,285	1,175
Isinglass	„	—	—
Lard	„	357	794
Lead:			
Ore	*Tons*	—	—
Pig	„	—	—
Linen Manufactures	*Value*		2
Liquorice:			
Juice	*Cwts.*	—	—
Paste	„	—	—
Root	„	90	109
Logwood	*Tons*	—	—
Madder and Madder Root	*Cwts.*	110	248
Manganese, Ore of	*Tons*	1,802	6,308
Manures, unenumerated	„	—	—
Mats and Matting	*Value*		68
Nuts:			
Small	*Bushels*	23	17
Walnuts	„	1,150	345
Oil:			
Train and Spermaceti	*Tuns*	68	5,123
Animal	*Cwts.*	192	428
Olive	*Tuns*	60	3,764
Palm	*Cwts.*	8,200	13,906
Seed, of all sorts	*Tuns*	123	5,725
Chemical and Perfumed	*Lbs.*	522	65
Oil or Spirit of Turpentine	*Cwts.*	1,169	4,121
Oil-seed Cakes	*Tons*	696	5,477
Onions	*Bushels*	8,317	6,844
Oranges and Lemons	„	11,569	5,572
Ores, unenumerated	*Value*	—	—
Paper:			
For Printing or Writing	*Cwts.*	20	51
Gilt, Coloured, or Fancy	*Lbs.*	12	87
Pictures	*Number*	99	1,073
Pitch	*Cwts.*	3,295	1,708
Plaster of Paris	*Tons*	115	288
Plate of Silver	*Ounces*	—	—
Plums:			
French	*Cwts.*	315	1,541
Dried	„	6	19
Pork, salted	„	1,521	3,001
Potatoes	„	37	7
Potato Flour	„	—	—
Rags and other Materials for making Paper	*Tons*	186	916
Raisins	*Cwts.*	4,639	6,784
Rice, not Rough, nor in the Husk	„	217	290
Rosin	„	3,835	6,072
Salt	*Tons*	619	619
Sarsaparilla	*Lbs.*	—	—
Seeds:			
Canary	*Cwts.*	139	103
Caraway	„	450	561
Carrot	„	—	—
Clover	„	540	1,469
Dari	„	—	—
Flax	*Qrs.*	67,982	205,929
Grass	*Cwts.*	2,325	2,697
Hemp	*Qrs.*	232	485
Linseed	„	—	—
Millet	*Cwts.*	—	—

App. No. 17.

IMPORTS into Ireland from Foreign Countries and British Possessions Abroad—*continued.*

ARTICLES.		YEAR 1864.	
		Quantities Imported.	Computed Real Value.
Seeds:			£.
Onion	*Cwts.*	11	66
Rape	*Qrs.*	28	84
Tares	„	—	—
Trefoil	*Cwts.*	100	113
Unenumerated	*Value*	-	302
Ships, Foreign, broken up or sold to be broken up	„	-	1
Shumach	*Tons*	209	2,994
Silk:			
Raw	*Lbs.*	—	—
Manufactures of	*Value*	-	90
Silver, Ore of	*Tons*	—	—
Skins, Sheep	*Number*	—	—
Spirits:			
Rum	*Gallons*	92	7
Brandy	„	137,966	42,252
Geneva	„	6,306	591
Other sorts	„	1,352	554
Starch	*Cwts.*	68	75
Stearine	„	90	320
Stones:			
Marble, rough	*Tons*	78	543
Marble, sawn	*Cwts.*	719	719
Slate, hewn	*Tons*	—	—
Millstones	„	61	271
In lumps not hewn	„	251	184
In blocks, shaped	„	325	264
Hewn, unenumerated	„	681	529
Straw or Grass for platting	*Cwts.*	—	—
Succades	*Lbs.*	5,451	409
Sugar:			
Refined and Candy	*Cwts.*	56,614	100,018
Unrefined	„	100,203	135,718
Molasses	„	158	103
Tallow	„	16,044	33,288
Tar	*Barrels*	7,811	8,036
Tea	*Lbs.*	798	61
Teeth, Elephants'	*Cwts.*	—	—
Tobacco:			
Unmanufactured	*Lbs.*	964,605	36,763
Manufactured	„	1,743	523
Tobacco Pipes, of clay	*Value*	-	1,184
Turpentine	*Cwts.*	223	303
Valonia	*Tons*	1,509	22,151
Verdigris	*Cwts.*	—	—
Vermicelli and Maccaroni	„	153	344
Vinegar	*Gallons*	9,981	956
Wax, Bees', unbleached	*Cwts.*	—	—
Wine	*Gallons*	692,740	237,352
Wood and Timber:			
Hewn, not sawn or split	*Loads*	67,123	216,303
Sawn	„	119,184	316,313
Staves	„	3,086	22,396
Lathwood	„	3,319	5,545
Greenheart	„	233	2,029
Mora, Locust, &c.	„	—	—
Treenails of all sorts	„	5	20
Hardwoods, Lignum vitæ	*Tons*	—	—
Hardwoods, Mahogany	„	12	104
Hardwoods, Walnutwood	„	17	140
Furniture and hardwoods, unenumerated	„	6	38
Wool, Sheep and Lambs'	*Lbs.*	13,480	723
Wool, Goats'	„	—	—
Woollen Manufactures	*Value*	-	159
Yarn, Cable	*Lbs.*	—	—
Yarn, Worsted of all sorts	„	—	—
Zinc	*Tons*	23	593
All other Articles	*Value*	-	13,785
TOTAL Value of all Articles	£.		5,120,214

App. No. 17.

ACCOUNT of all Articles Exported from *Ireland* to Foreign Countries and the British Possessions Abroad, with the Declared or Computed Value of each, and their Total Amount.

EXPORTS of British and Irish Produce and Manufactures from *Ireland* to Foreign Countries and British Possessions Abroad.

ARTICLES.		YEAR 1864.	
		Quantities Exported.	Declared Real Value.
Apparel, Slops, and Negro Clothing	*Value*	- -	£. 24,917
Bacon and Hams	*Cwt.*	136	412
Beef and Pork	„	447	1,249
Beer and Ale	*Barrels*	1,136	2,428
Bleaching Materials	*Cwt.*	2,580	1,251
Butter	„	20,913	97,662
Coals, Cinders, and Culm	*Tons*	3,175	1,988
Cordage	*Cwt.*	246	520
Corn:			
Wheat and Wheat Flour	*Qrs.*	37	90
Oats and Oatmeal	„	25,052	24,258
Cotton Manufactures:			
Entered by the yard	*Yards*	182,780	3,886
Otherwise than by the yard	*Value*	- -	525
Drugs and Chemical Products	„	- -	8
Epsom Salts and Salt Cake	*Cwt.*	115,086	19,455
Flax, dressed and undressed	„	5,826	18,500
Haberdashery and Millinery	*Value*	- -	21
Horses	*Number*	20	600
Iron:			
Pig	*Tons*	4,288	12,971
Bar	„	271	2,116
Cast and Wrought	„	1	13
Old, for re-manufacture	„	479	1,738
Lard	*Cwts.*	79	274
Lead and Shot	*Tons*	2	42
Leather:			
Unwrought	*Cwts.*	23	217
Wrought	*Lbs.*	5,010	1,000
Linen Manufactures:			
Entered by the yard	*Yards*	142,241	4,653
Otherwise than by the yard	*Value*	- -	632
Oysters	*Bushels*	20,400	4,630
Paper of all sorts	*Cwts.*	9	30
Potatoes	„	27,521	3,218
Provisions not otherwise described	*Value*	- -	3,049
Salt, Rock and White	*Tons*	363	137
Skins, Sheep and Lambs'	*Number*	25,908	1,166
Soap	*Cwts.*	583	624
Spirits, Irish and British	*Gallons*	66,732	8,293
Stationery, other than Paper	*Value*	- -	10
Woollen Manufactures:			
Entered by the yard	*Yards*	1,910	168
Otherwise than by the yard	*Value*	- -	21
All other Articles	„	- -	4,713
	TOTAL £.		247,485

App. No. 17.

EXPORTS of Foreign and Colonial Merchandise from *Ireland* to Foreign Countries and British Possessions Abroad.

		YEAR 1864.	
		Quantities Exported.	Computed Real Value.
			£.
Corn, Indian	*Cwts.*	214	67
Seeds, Flax	*Qrs.*	743	2,251
Spirits:			
Brandy	*Proof Gallons*	3,203	981
Rum	„	296	27
Sweetened or Perfumed	*Gallons*	140	140
Tea	*Lbs.*	198	15
Tobacco, manufactured, and Cigars	„	110	42
Wine:			
Red	*Gallons*	7,077	1,688
White	„	13,491	5,087
All other Articles collectively		-	8
	TOTAL £.		10,306

SUMMARY.

	IMPORTS into Ireland from Foreign Countries and British Possessions Abroad (computed Real Value).	EXPORTS from Ireland to Foreign Countries and British Possessions Abroad.		
		British and Irish Produce and Manufactures (Declared Value).	Foreign and Colonial Merchandise (computed Real Value).	TOTAL Exports.
	£.	£.	£.	£.
Year 1864	5,120,214	247,485	10,306	257,791

Office of the Inspector General of Imports and Exports, Custom House, London, 2 May 1865.

John A. Messenger.

ACCOUNT of the Quantities of CORN and MEAL, whether of Native or of Foreign Growth, distinguishing the several Sorts, imported into *Ireland* from *Great Britain*, in the Year ended 31st day of December 1864, with the Computed Value thereof; and, similar RETURN of CORN and MEAL exported from *Ireland* to *Great Britain*.

	CORN, GRAIN, MEAL and FLOUR imported into Ireland from Great Britain, in the Year 1864.						CORN, GRAIN, MEAL and FLOUR exported from Ireland to Great Britain, in the Year 1864.					
	QUANTITIES.			COMPUTED REAL VALUE.			QUANTITIES.			COMPUTED REAL VALUE.		
	British Growth.	Foreign Growth.	TOTAL.	British Growth.	Foreign Growth.	TOTAL.	Irish Growth.	Foreign Growth.	TOTAL.	Irish Growth.	Foreign Growth.	TOTAL.
	Qrs.	*Qrs.*	*Qrs.*	£.	£.	£.	*Qrs.*	*Qrs.*	*Qrs.*	£.	£.	£.
Wheat	200,455	69,849	270,304	402,650	139,358	542,008	14,184	388	14,572	28,491	774	29,265
Barley	17,301	1,259	18,560	25,874	1,485	27,359	35,040	- -	35,040	52,404	- -	52,404
Oats	4,205	32	4,237	4,228	29	4,257	1,186,993	- -	1,186,993	1,193,484	- -	1,193,484
Peas	1,466	- -	1,466	2,501	- -	2,501	758	- -	758	1,293	- -	1,293
Beans	557	7	564	1,005	11	1,016	33,944	- -	33,944	61,220	- -	61,220
Indian Corn	- -	28,044	28,044	- -	37,809	37,809	- -	12,518	12,518	- -	16,877	16,877
Malt	10,607	- -	10,607	15,911	- -	15,911	3,399	- -	3,399	5,099	- -	5,099
TOTAL of CORN and GRAIN	234,591	99,191	333,782	452,169	178,692	630,861	1,274,318	12,906	1,287,224	1,341,991	17,651	1,359,642
	Cwts.	*Cwts.*	*Cwts.*				*Cwts.*	*Cwts.*	*Cwts.*			
Wheatmeal or Flour	164,708	248,787	413,495	103,800	156,010	259,810	95,587	83	95,670	60,240	52	60,292
Barleymeal	- -	- -	- -	- -	- -	- -	70	- -	70	35	- -	35
Oatmeal	744	1,866	2,610	391	906	1,297	838,307	- -	838,307	440,111	- -	440,111
Beanmeal	5	- -	5	3	- -	3	1,802	- -	1,802	976	- -	976
Indian Cornmeal	- -	- -	- -	- -	- -	- -	- -	5,786	5,786	- -	2,543	2,543
TOTAL of MEAL and FLOUR	165,457	250,653	416,110	104,194	156,916	261,110	935,766	5,869	941,635	501,362	2,595	503,957
	Qrs.	*Qrs.*	*Qrs.*				*Qrs.*	*Qrs.*	*Qrs.*			
AGGREGATE of CORN, GRAIN, MEAL, and FLOUR stated in Quarters	282,124	171,460	453,584	556,363	335,608	891,971	1,835,642	14,618	1,850,260	1,843,353	20,246	1,863,599

Office of the Inspector General of Imports and Exports,
Custom House, London, 2 May 1865.

John A. Messenger.

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REFORM CLUB PALL MALL

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ARTERIAL DRAINAGE:

1. *Generally as to the System Administered by the Board of Works.*
2. *As to the Estimates and Expenditure, the Assessment on the Lands, and the Amount of Benefit conferred.*
3. *Shannon Arterial Drainage.*
4. *Total Area improved.*
5. *Total Advances, Repayments, and Remissions.*
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7. *Limited Operations under the Act of* 1863.
8. *Large Area in want of Arterial Drainage.*
9. *Maintenance of Works.*
10. *Suggestions for increased Facilities in regard to Loans; Steps already taken on this Score.*

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3. *Shannon Arterial Drainage*—continued.

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REPORT

FROM THE

COMMITTEE

UPON

EXPIRING LAWS:

FOR THE

VII[TH] Session—XVIII[TH] Parliament of the United Kingdom of GREAT BRITAIN and IRELAND.

(28 VICTORIA, 1865.)

Ordered, by The House of Commons, *to be Printed,*
20 *June* 1865.

Martis, 13° *die Junii*, 1865.

Ordered, THAT a Select Committee be appointed to inquire what Temporary Laws of a Public and General Nature are now in force, and what Laws of the like nature have expired since the last Report on the subject; and also, what Laws of the like nature are about to expire at particular periods, or in consequence of any contingent public event; and to report the same, with their Observations thereupon, to The House.

Committee nominated of—

Mr. Peel.
Mr. Dodson.
Sir Stafford Northcote.
Mr. Attorney General.
Mr. Solicitor General.
Mr. Adderley.
Mr. Cowper.
Sir William Jolliffe.
Colonel French.
Mr. Baring.
Mr. Brand.
Mr. Dunlop.
Lord John Manners.

Ordered, THAT the Committee have power to send for Persons, Papers and Records.

Ordered, THAT Three be the Quorum of the Committee.

REPORT.

THE SELECT COMMITTEE appointed to inquire what TEMPORARY LAWS of a Public and General Nature ARE NOW IN FORCE, and what Laws of the like nature have EXPIRED since the last Report on the subject; and also, what Laws of the like nature ARE ABOUT TO EXPIRE at particular Periods, or in consequence of any Contingent Public Event; and to report the same, with their Observations thereupon, to The HOUSE:—

HAVE considered the Matters to them referred, and have agreed to the following Report.

20 *June* 1865.

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REGISTER OF TEMPORARY LAWS NOW IN FORCE.

Matter.	*Date.*	*Ch.*	*When passed.*	*Title of the Act.*	*Duration.*
1. BANK of ENGLAND INCORPORATION.	5,6 W.&M.	20, §20. 21.	7 Nov. 1693.	For granting to their Majesties several Rates and Duties upon Tonnage of Ships and Vessels, and upon Beer, Ale, and other Liquors; for securing certain Recompences and Advantages, in the said Act mentioned, to such Persons as shall voluntarily advance the Sum of £. 1,500,000. towards the carrying on the War against France.	
	8, 9 W. 3.	20, §26. 27.			
	N. B.—Clauses for continuing this Corporation in successive Loan Acts down to				
	19, 20 Vict.	21.	5 June 1856.	Bank continued as a Corporation - - - -	Till payment of Sums due to the Bank, and Redemption of all Bank Annuities created by Parliament.
				Note.—As to the Bank of England Privileges, *see* No. 5.	
2. BANK of IRELAND.	Acts of the Parliament of Ireland.				
	21,22 Geo. 3.	16.	1781.	For establishing a Bank, by the Name of The Governor and Company of the Bank of Ireland.	
	amended by				
	31 Geo. 3.	22.			
	37 Geo. 3.	50.			
	Acts of the United Parliament.				
	48 Geo. 3.	103.			
	1, 2 Geo. 4.	72.			
	3 Geo. 4.	26.			
	7 Will. 4. & 1 Vict.	59.			
	1, 2 Vict.	81.			
	2, 3 Vict.	91.			
	3, 4 Vict.	75.			
	8, 9 Vict.	37.	21 July 1845.	Bank of Ireland continued as a Corporation, and may be dissolved,	After 1 January 1855, on Twelve Months' Notice, and repayment of Debt due from the Public to the Bank.

REGISTER OF TEMPORARY LAWS NOW IN FORCE—*continued.*

Matter.	*Date.*	*Ch.*	*When passed.*	*Title of the Act.*	*Duration.*	
3. COAL TRADE (PORT OF LONDON.)	1,2 Will. 4.	lxxvi.	Local.	For regulating the Vend and Delivery of Coals in the Cities of London and Westminster, and in certain Parts of the Counties of Middlesex, Surrey, Kent, Essex, Hertfordshire, Buckinghamshire and Berkshire.	5 July	1882
	continued					
	8,9 Vict.	101.				
	and amended					
	24,25 Vict.	42.	22 July 1861.			
	continued					
	26,27 Vict.	46.	13 July 1863.			
4. EAST INDIA COMPANY'S DIVIDEND.	3,4 Will. 4.	85.	28 Aug. 1833.	For effecting an Arrangement with the East India Company, and for the better Government of His Majesty's Indian Territories.		
	amended by					
	16,17 Vict.	95.	20 Aug. 1853.	3 & 4 Will. 4, c. 85, § 12. Dividend on East India Stock subject to Redemption by Parliament (on 12 Months' notice) upon and at any time after - - - - - -	30 April	1874
	Rights in respect of Dividend saved by					
	21,22 Vict.	106.		§ 13. If the Company be deprived of the Government of India they may within one year thereafter demand Redemption of the Dividend,* and Dividend must be redeemed within three years after such demand.		
	Partly repealed by					
	24,25 Vict.	67.	1 Aug. 1861.	[* The one year expires 1 September 1859, *see* 21 & 22 Vic. c. 106.]		
5. BANK OF ENGLAND PRIVILEGES.	3,4 W. 4.	98.	29 Aug. 1833.	For giving to the Corporation of the Governor and Company of the Bank of England certain Privileges for a limited Period, under certain Conditions.	Determinable on 12 Months' Notice, after 1 August 1855, and on Repayment of the Debt due from the Public to the Bank.	
	amended by					
	7,8 Vict.	32.				
	8,9 Vict.	37, s. 6.				
	,,	38, s. 15.				
	and see as to s. 7.					
	17,18 Vict.	90.		Note.—Sec. 6 seems permanent.		
6. LINEN, HEMPEN, COTTON and other MANUFACTURES (Ireland.)	5,6 Will. 4.	27.	21 Aug 1835.	To continue and amend certain Regulations for the Linen and Hempen Manufactures in Ireland.	13 August	1869
	amended					
	3,4 Vict.	91.	10 Aug. 1840.	For the more effectual Prevention of Frauds and Abuses committed by Weavers, Sewers and other Persons employed in the Linen, Hempen Union, Cotton, Silk and Woollen Manufactures in Ireland, and for the better Payment of their Wages, for One Year, and from thence to the End of the then next Session of Parliament.		
	continued and amended					
	5,6 Vict.	68.				
	7,8 Vict.	47.				
	continued					
	27,28 Vict.	84.	29 July 1864.			

REGISTER OF TEMPORARY LAWS NOW IN FORCE—*continued.*

Matter.	*Date.*	*Ch.*	*When passed.*	*Title of the Act.*	*Duration.*	
7. CIVIL LIST.	1, 2 Vict.	2.	23 Dec. 1837.	For the Support of Her Majesty's Household, and of the Honour and Dignity of the Crown of the United Kingdom of Great Britain and Ireland - - - - - - -	6 Months after the Death of Her Majesty.	
	amended					
	1, 2 Vict.	92.				
	15, 16 Vict.	39.				
8. OATHS, UNLAWFUL. (Ireland).	2, 3 Vict.	74.	24 Aug. 1839.	To extend and render more effectual an Act [4 Geo. 4, c. 87] to amend an Act [50 Geo. 3, c. 102] for preventing the administering and taking unlawful Oaths in Ireland.	7 July and END of then NEXT SESSION.	1867
	continued and amended					
	11, 12 Vict.	89.	31 Aug. 1848.			
	continued					
	25, 26 Vict.	32.	7 July 1862.			
9. POOR RATES, STOCK IN TRADE EXEMPTION.	3, 4 Vict.	89.	10 Aug. 1840.	To exempt Inhabitants of Parishes, Townships, and Villages from liability to be rated as such, in respect of Stock in Trade or other Property, to the Relief of the Poor, until - - -	1 October and END of then NEXT SESSION.	1865
	continued					
	26, 27 Vict.	95.	28 July 1863.			
10. SURVEY of GREAT BRITAIN.	4, 5 Vict.	30.	21 June 1841.	To authorize and facilitate the Completion of a Survey of Great Britain, Berwick-upon-Tweed and the Isle of Man.	31 December	1866
	amended and continued					
	19, 20 Vict.	61.	21 July 1856.			
	continued					
	24, 25 Vict.	65	1 Aug. 1861.			
11. HIGHWAY RATES. (E.)	4, 5 Vict.	59.	22 June 1841.	To authorize the Application of a Portion of the Highway Rates to Turnpike Roads, in certain Cases.	1 October and END of then NEXT SESSION.	1865
	continued					
	23, 24 Vict.	67.	6 Aug. 1860.			

REGISTER OF TEMPORARY LAWS NOW IN FORCE—*continued.*

Matter.	*Date.*	*Ch.*	*When passed.*	*Title of the Act.*	*Duration.*	
12. LUNATIC ASYLUMS (Ireland).	5, 6 Vict.	123.	12 Aug. 1842.	For amending the Law relating to Private Lunatic Asylums in Ireland.	1 August and END of then NEXT SESSION.	1865
	continued					
	24, 25 Vict.	57.	1 Aug. 1861.			
13. COURTS MARTIAL (East Indies).	7, 8 Vict.	18.	6 June 1844.	To remove Doubts as to the Power of appointing, convening and confirming the Sentences of Courts Martial in the East Indies.	Continues, so far as regards Officers and Soldiers in Her Majesty's Service, during the continuance of any Act for punishing Mutiny and Desertion, &c.	
14. LANDED PROPERTY IMPROVEMENT (Ireland.)	10 Vict.	32.	8 June 1847.	To facilitate the Improvement of Landed Property in Ireland.		
	amended					
	13, 14 Vict.	31.				
	continued					
	26, 27 Vict.	95.	28 July 1863.	As to Powers of Commissioners - - -	1 January and END of then NEXT SESSION.	1865
15. POOR LAWS (Ireland).	10, 11 Vict.	90.	22 July 1847.	To provide for the Execution of the Laws for Relief of the Poor in Ireland.		
	amended					
	14, 15 Vict.	68.				
	continued		29 July 1864.			
	27, 28 Vict.	84.		As to appointment of Commissioners, &c. -	23 July and END of then NEXT SESSION.	1865
16. ECCLESIASTICAL JURISDICTION.	10, 11 Vict.	98.	22 July 1847.	To amend the Law as to Ecclesiastical Jurisdiction in England.		
	continued					
	27, 28 Vict.	84.	29 July 1864.	As to certain Provisions - - - -	1 August and END of then NEXT SESSION.	1865
17. POOR LAW.	10, 11 Vict.	109.	23 July 1847.	For the Administration of the Laws for Relief of the Poor in England.		
	continued					
	26, 27 Vict.	55.	21 July 1863.	As to appointment of Commissioners, &c. -	23 July and END of then NEXT SESSION.	1864

REGISTER OF TEMPORARY LAWS NOW IN FORCE—*continued.*

Matter.	*Date.*	*Ch.*	*When passed.*	*Title of the Act.*	*Duration.*	
18. PRESERVATION OF THE PEACE (Ireland).	19, 20 Vict.	36.	30 June 1856.	For the better Preservation of the Peace in Ireland.	1 July and END of then NEXT SESSION.	1864
	amended					
	23, 24 Vict.	138.	28 Aug. 1860.			
	continued					
	25, 26 Vict.	24.	30 June 1862.			
19. COUNTY CESS, IRELAND.	11, 12 Vict.	32.	22 July 1848.	To facilitate the Collection of County Cess in Ireland.	1 August and END of then NEXT SESSION.	1865
	amended					
	20, 21 Vict.	7.	3 July 1857.			
	continued					
	27, 28 Vict.	84.	29 July 1864.			
20. SHEEP AND CATTLE (Diseased).	11, 12 Vict.	107.	4 Sept. 1848.	To prevent the spreading of contagious or infectious Disorders among Sheep, Cattle and other Animals.	1 August and END of then NEXT SESSION.	1865
	extended					
	16, 17 Vict.	62.	4 Aug. 1853.			
	continued					
	27, 28 Vict.	84.	29 July 1864.			
21. COPYHOLD INCLOSURE and TITHE COMMISSIONS.	14, 15 Vict.	53.	1 Aug. 1851.	To consolidate and continue the Copyhold and Inclosure Commissions, and to provide for the Completion of Proceedings under the Tithe Commutation Acts. Temporary as to appointment of Commissioners, &c.	1 August and END of then NEXT SESSION.	1867
	continued					
	25, 26 Vict.	73.	7 Aug. 1862.			
22. EPISCOPAL and CAPITULAR ESTATES MANAGEMENT.	14, 15 Vict.	104.	8 Aug. 1851.	To facilitate the Management and Improvement of Episcopal and Capitular Estates in England. *Note.*—This Act is applied by 21 & 22 Vict. c. 94 (s. 19), which is a permanent Act.	1 January and END of then NEXT SESSION.	1865
	continued and amended					
	17, 18 Vict.	116.	11 Aug. 1854.			
	27, 28 Vict.	84.	29 July 1864.			

REGISTER OF TEMPORARY LAWS NOW IN FORCE—*continued.*

Matter.	*Date.*	*Ch.*	*When passed.*	*Title of the Act.*	*Duration.*	
23. CORRUPT PRACTICES PREVENTION ACT, 1854.	17, 18 Vict.	102.	10 Aug. 1854.	To consolidate and amend the Laws relating to Bribery, Treating and undue Influence at Elections of Members of Parliament.	8 June and END of the NEXT SESSION.	1868
	partially repealed and remainder continued by					
	26, 27 Vict.	29.	8 June 1863.			
24. INCUMBERED ESTATES (West Indies.)	17, 18 Vict.	117.	11 Aug. 1854.	To facilitate the Sale and Transfer of Incumbered Estates in the West Indies.		
	amended and continued					
	21, 22 Vict.	96.	2 Aug. 1858.			
	amended					
	25, 26 Vict.	45.	17 July 1862.	Temporary as to the offices, &c. of Commissioners - - - - - - - -	2 August	1865
	continued					
	27, 28 Vict.	84.	29 July 1864.			
	and amended					
	27, 28 Vict.	108.	29 July 1864.			
25. LUNATICS (SCOTLAND) ACT AMENDMENT.	21, 22 Vict.	89.	2 Aug. 1858.	To amend an Act of the last Session, for the Regulation of the Care and Treatment of Lunatics, and for the Provision, Maintenance and Regulation of Lunatic Asylums in Scotland.		
	continued and amended					
	27, 28 Vict.	59.	25 July 1864.			
				As to Deputy Commissioners - - -	1 August	1866
26. MUTINY ACT (Army).	27, 28 Vict.	3.	18 Mar. 1864.	For punishing Mutiny and Desertion, and for the better Payment of the Army and their Quarters.		
				Continuance: In Great Britain - - -	25 April	1865
				- - - - Ireland, Jersey, Guernsey, Alderney, Sark and Isle of Man	1 May	
				- - - - Gibraltar, the Mediterranean, Spain and Portugal - -	1 August	
				- - - - Elsewhere in Europe, and in the West Indies and America -	1 Sept.	
				- - - - Cape of Good Hope, Isle of France or Mauritius, St. Helena, and Western Coast of Africa - - - - -	1 January	1866
				- - - - Elsewhere - - - -	1 February	1867

REGISTER OF TEMPORARY LAWS NOW IN FORCE—*continued.*

Matter.	*Date.*	*Ch.*	*When passed.*	*Title of the Act.*	*Duration.*	
27. MUTINY ACT (Marine Forces).	27, 28 Vict.	4.	18 Mar. 1864.	For the Regulation of Her Majesty's Royal Marine Forces while on Shore.		
				Continuance: In Great Britain - - -	25 April	1865
				- - - - - Ireland, Jersey, Guernsey, Alderney, Sark and Isle of Man	1 May	1865
				- - - - - Gibraltar, Spain and Portugal -	1 August	1865
				- - - - - Elsewhere in Europe, and the West Indies, North America, and Cape of Good Hope -	1 Sept.	1865
				- - - - - Elsewhere - - - - -	1 February	1866
28. DWELLINGS FOR LABOURING CLASSES (Ireland).	23, 24 Vict.	19.	15 May 1860.	To extend the Act to facilitate the Improvement of Landed Property in Ireland, and the Acts amending the same, to the Erection of Dwellings for the Labouring Classes in Ireland.	15 May and END of then NEXT SESSION.	1870
29. INDEMNITY OFFICES, &c.	27, 28 Vict.	49.	25 July 1864.	To indemnify such Persons in the United Kingdom as have omitted to qualify themselves for Offices and Employments, and to extend the Time limited for those Purposes respectively until - - - - - - -	25 March and END of then SESSION.	1865
30. TURNPIKE ACTS, (G. B.)	27, 28 Vict.	75.	29 July 1864.	To continue certain Turnpike Acts in Great Britain.		
				As to certain Acts - - - - - -	1 November and END of then NEXT SESSION.	1865
				As to certain Acts - - - - - -	1 November	1865
31. MILITIA BALLOTS SUSPENSION.	27, 28 Vict.	63.	25 July 1864.	To amend the Laws relating to the Ballots for the Militia in England, and to suspend the making of Lists and Ballots for the Militia of the United Kingdom.	1 October	1865

REGISTER OF TEMPORARY LAWS NOW IN FORCE—*continued.*

Matter.	*Date.*	*Ch.*	*When passed.*	*Title of the Act.*	*Duration.*	
32. MILITIA PAY (G. B. & I.)	27, 28 Vict.	69.	25 July 1864.	To defray the Charge of the Pay, Clothing, and Contingent and other Expenses of the Disembodied Militia in Great Britain and Ireland; to grant Allowances to certain Officers of the Militia; and to authorize the Employment of the Non-commissioned Officers.	1 September	1865
33. PARTY EMBLEMS (Ireland).	23, 24 Vict.	141.	28 Aug. 1860.	To amend an Act passed in the 13th year of Her Majesty to restrain Party Processions in Ireland.	28 August	1865
34. PENSIONS, BRITISH FORCES (India).	25, 26 Vict.	27.	30 June 1862.	To increase the Amount payable out of the Revenues of India in respect of the Rating, Pay, Pensions, and other expenses of that nature, of Her Majesty's British Forces serving in India.	31 Mar.	1867
35. SALMON FISHERY ACT, 1861.	24, 25 Vict. 27, 28 Vict.	109. 84.	6 Aug. 1861. 29 July 1864.	An Act to amend the Laws relating to Fisheries of Salmon in England. As to offices of Inspectors of Fisheries.	1 October	1865
36. INDUSTRIAL SCHOOLS.	24, 25 Vict. continued 25, 26 Vict.	113. 10.	6 Aug. 1861. 11 April 1862.	For amending and consolidating the Law relating to Industrial Schools.	1 January	1867

REGISTER OF TEMPORARY LAWS NOW IN FORCE—*continued.*

Matter.	*Date.*	*Ch.*	*When passed.*	*Title of the Act.*	*Duration.*	
37. INDUSTRIAL SCHOOLS (Scotland).	24,25 Vict. continued 25, 26 Vict.	132. 10.	6 Aug. 1861. 11 April 1862.	For consolidating and amending the Law relating to Industrial Schools in Scotland.	1 January	1867
38. PROMISSORY NOTES.	26, 27 Vict.	105.	28 July 1863.	To remove certain Restrictions on the Negotiation of Promissory Notes and Bills of Exchange under a limited Sum.	28 July and END of then NEXT SESSION.	1866
39. SALMON FISHERY (IRELAND) ACT, 1863.	26, 27 Vict.	114.	28 July 1863.	An Act to amend the Laws relating to Fisheries in Ireland. As to the offices of the Special Commissioners for Irish Fisheries.	28 July and END of then NEXT SESSION.	1865
40. ALKALI ACT (1863.)	26, 27 Vict.	124.	28 July 1863.	For the more effectual Condensation of Muriatic Acid Gas in Alkali Works.	1 July	1868
41. SALMON FISHERIES (SCOTLAND) ACT AMENDMENT.	25, 26 Vict. amended and continued 26, 27 Vict.	97. 50.	2 Aug. 1862. 13 July 1863.	To regulate and amend the Law respecting the Salmon Fisheries of Scotland.	1 January	1866
42. MALT FOR ANIMALS.	27, 28 Vict.	9.	28 April 1864.	To allow the making of Malt Duty Free to be used in Feeding Animals.	28 April and END of then NEXT SESSION.	1869

REGISTER OF TEMPORARY LAWS NOW IN FORCE—*continued.*

Matter.	*Date.*	*Ch.*	*When passed.*	*Title of the Act.*	*Duration.*	
43. PROMISSORY NOTES AND BILLS OF EXCHANGE (Ireland).	27, 28 Vict.	20.	13 May 1864.	To remove certain Restrictions on the Negotiation of Promissory Notes and Bills of Exchange under a limited Sum in Ireland.	13 May and END of NEXT ENSUING SESSION.	1866
44. CHAIN CABLES AND ANCHORS.	27, 28 Vict.	27.	23 June 1864.	For regulating the Proving and Sale of Chain Cables and Anchors.	1 July	1872
45. CONTAGIOUS DISEASES.	27, 28 Vict.	85.	29 July 1864.	For the Prevention of Contagious Diseases at certain Naval and Military Stations.	29 July	1867
46. BANK POST BILLS (Ireland).	27, 28 Vict.	86.	29 July 1864.	To permit, for a limited Period, Compositions for Stamp Duty on Bank Post Bills of Five Pounds and upwards in Ireland.	29 July	1867
47. PUBLIC SCHOOLS.	27, 28 Vict.	92.	29 July 1864.	For annexing Conditions to the Appointment of Persons to Offices in the Governing Bodies of certain Public Schools and Colleges.	1 August	1865
48. POOR RELIEF, METROPOLIS.	27, 28 Vict.	116.	29 July 1864.	To make Provision for distributing the Charge of Relief of certain Classes of Poor Persons over the whole of the Metropolis.	25 March	1865

INDEX OF TEMPORARY LAWS.

Class I.

TEMPORARY LAWS

THE DURATION OF WHICH IS CERTAIN, UNLESS SO FAR AS THEY DEPEND ON THE SITTING OF PARLIAMENT.

ARRANGED IN ORDER OF THEIR DURATION.

* The ACTS having this mark, are continued to the Date set against them, and to the End of the then next Session.

† The ACTS having this mark, are continued to the Date set against them, and to the End of the then Session.

No.	*Matter.*	*Date of last continuing Act.*	*Duration.*
18	Peace Preservation (Ireland)	25, 26 Vict. c. 24	1 July - 1864*
17	Poor Law	26, 27 Vict. c. 55	23 July - 1864*
22	Episcopal and Capitular Estates Management	27, 28 Vict. c. 84	1 January - 1865*
14	Landed Property Improvement (Ireland)	26, 27 Vict. c. 95	1 January - 1865*
29	Indemnity	27, 28 Vict. c. 49	25 March - 1865†
26	Mutiny	27, 28 Vict. c. 3	25 April - 1865
27	Mutiny (Marine Forces)	27, 28 Vict. c. 4	25 April - 1865
15	Poor Laws (Ireland)	27, 28 Vict. c. 84	23 July - 1865*
40	Salmon Fishery (Ireland), 1863	26, 27 Vict. c. 114	28 July - 1865*
16	Ecclesiastical Jurisdiction	27, 28 Vict. c. 84	1 August - 1865*
19	County Cess (Ireland)		1 August - 1865*
20	Sheep and Cattle (Diseased)		1 August - 1865*
12	Lunatic Asylums (Ireland)	24, 25 Vict. c. 57	1 August - 1865*
47	Public Schools	27, 28 Vict. c. 92	1 August - 1865
24	Incumbered Estates (West Indies)	17, 18 Vict. c. 117 27, 28 Vict. c. 84, 108	2 August - 1865*
33	Party Emblems (Ireland)	23, 24 Vict. c. 141	28 August - 1865
32	Militia Pay (G. B. & I.)	27, 28 Vict. c. 69	1 September 1865
31	Militia Ballot Suspension	27, 28 Vict. c. 63	1 October - 1865
35	Salmon Fishery, 1861	27, 28 Vict. c. 84	1 October - 1865
11	Highway Rates (England)	23, 24 Vict. c. 67	1 October - 1865*
9	Poor Rates, Stock in Trade Exemption	26, 27 Vict. c. 95	1 October - 1865*
30	Turnpike Acts (G. B.)	27, 28 Vict. c. 75	1 November 1865* 1 November 1865
41	Salmon Fisheries (Scotland) Act Amendment	26, 27 Vict. c. 50	1 January - 1866

CLASS I.—TEMPORARY LAWS THE DURATION OF WHICH IS CERTAIN, &c.—*continued.*

No.	*Matter.*	*Date of last continuing Act.*	*Duration.*
43	Promissory Notes and Bills of Exchange (Ireland)	27, 28 Vict. c. 20	13 May 1866*
38	Promissory Notes	26, 27 Vict. c. 105	28 July 1866*
25	Lunatics (Scotland) Act Amendment	27, 28 Vict. c. 59	1 August 1866
10	Survey of Great Britain	24, 25 Vict. c. 65	31 December 1866
36	Industrial Schools	25, 26 Vict. c. 10	1 January 1867
37	Industrial Schools (Scotland)		
34	Pensions, British Forces (India)	25, 26 Vict. c. 27	31 March 1867
45	Contagious Diseases	27, 28 Vict. c. 85	29 July 1867
46	Bank Post Bills (Ireland)	27, 28 Vict. c. 86	29 July 1867
8	Oaths Unlawful (Ireland)	25, 26 Vict. c. 32	7 July 1867*
21	Copyhold Inclosure and Tithe Commissions	25, 26 Vict. c. 73	1 August 1867*
23	Corrupt Practices Prevention Act (1854)	26, 27 Vict. c. 95	8 June 1868*
40	Alkali Act (1863)	26, 27 Vict. c. 124	1 July 1868
42	Malt for Animals	27, 28 Vict. c. 9	28 April 1869*
6	Linen, Hempen, &c. Manufactures (Ireland)	27, 28 Vict. c. 84	13 August 1869
28	Dwellings for Labouring Classes (Ireland)	23, 24 Vict. c. 19	15 May 1870*
44	Chain Cables and Anchors	27, 28 Vict. c. 27	1 July 1872
3	Coal Trade (Port of London)	26, 27 Vict. c. 46	5 July 1882

N.B.—By 48 Geo. 3, c. 106, if a Bill is introduced for the continuance of any Act which would expire in the same Session, and such Act shall expire before the Bill for continuing the same receives the Royal Assent, the continuing Act takes effect from the expiration of the former Act, but not so as to affect any person with any penalty in the interval.

Class II.

TEMPORARY LAWS

THE DURATION OF WHICH IS UNCERTAIN.

ARRANGED IN ALPHABETICAL ORDER.

No.	*Name.*	*Date of last continuing Act.*	*Duration.*
1	Bank of England Incorporation.	19, 20 Vict. c. 21 -	- - Till Payment of Sums due to the Bank, and Redemption of all Bank Annuities created by Parliament.
5	Bank of England Privileges.	3, 4 Will. 4, c. 98 -	- - Determinable on 12 Months' Notice after 1st August 1855, and on Repayment of Debt due from the Public to Bank.
2	Bank of Ireland -	8, 9 Vict. c. 37 - -	- - May be dissolved after 1 January 1855 on 12 Months' Notice, and Repayment of Debt due from the Public to the Bank.
7	Civil List - - -	1, 2 Vict. c. 2 - -	Six Months after the Death of Her Majesty.
13	Courts Martial (East Indies).	7, 8 Vict. c. 18 - -	- - During the continuance of any Act for punishing Mutiny and Desertion, &c.
4	East India Company's Dividend.	3, 4 Will. 4, c. 85 -	- - Dividend subject to redemption by Parliament (on 12 Months' Notice) upon and at any time after 20th April 1874. As to right to demand redemption of Dividend, *see* No. 4 of Register.

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TO

LAWS which were inserted in the Register of Temporary Laws then in force in the last Report of the Committee on Expiring Laws,

(June 1864),

But which are now omitted.

Subject.	*No. in Register 1864.*	*Reason for Omission.*
Government of British Columbia	26	- - - - Expired.
Unions Relief Aid - - -	39	- - - - Expired.
Poor Relief, Metropolis - -	- -	- - - - Expired.

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OF THE SUBJECT-MATTER OF THE ACTS CONTAINED IN THIS REPORT.

The * signifies that the Act relates *exclusively* to Ireland.

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REPORT

FROM THE

COMMITTEE

UPON

EXPIRING LAWS.

Ordered, by The House of Commons, *to be Printed,*
20 *June* 1865.

391.

Under 3 *oz.*

SPECIAL

REPORT

FROM THE

SELECT COMMITTEE

ON THE

CHEMISTS AND DRUGGISTS BILL,

AND

CHEMISTS AND DRUGGISTS (No. 2) BILL;

TOGETHER WITH THE

PROCEEDINGS OF THE COMMITTEE,

MINUTES OF EVIDENCE,

AND APPENDIX.

Ordered, by The House of Commons, *to be Printed,*
19 *June* 1865.

Mercurii, 29° *die Martii*, 1865.

CHEMISTS and DRUGGISTS (No. 1) Bill read 2°, and committed to a Select Committee.

CHEMISTS and DRUGGISTS (No. 2) Bill read 2°, and committed to the Select Committee on the Chemists and Druggists Bill.

Jovis, 6° *die Aprilis*, 1865.

Committee nominated of—

Sir FitzRoy Kelly.
Sir John Shelley.
Lord Elcho.
Mr. Baring.
Dr. Brady.
Mr. Hastings Russell.
Mr. Charles Wynn.
Mr. Ayrton.
Mr. Sclater-Booth.
Mr. Cox.
Mr. Schneider.
Sir James Fergusson.
Mr. Charles Forster.
Mr. Roebuck.
Mr. Black.

Ordered, THAT Five be the Quorum of the Committee.

Veneris, 5° *die Maii*, 1865.

Ordered, THAT the Committee have power to send for Persons, Papers, and Records.

Ordered, THAT all Petitions relative to the Chemists and Druggists Bills be referred to the Committee.

Martis, 13° *die Junii*, 1865.

Ordered, That the Committee have leave to make a Special Report, together with the Minutes of Evidence taken before them, to The House.

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SPECIAL REPORT.

THE SELECT COMMITTEE to whom were referred the CHEMISTS and DRUGGISTS BILL, and the CHEMISTS and DRUGGISTS (No. 2) BILL;—HAVE considered the said Bills, and have agreed to the following SPECIAL REPORT:—

YOUR Committee have examined witnesses on the general questions raised by the provisions contained in the two Bills committed to them, and have heard evidence in support of the Chemists and Druggists (No. 1) Bill.

Your Committee then passed the following Resolutions:

1st. That no compulsory examination or registration under the Bills referred to the Committee should be required of persons now carrying on the trade of chemists and druggists.

2d. That the Bill do provide that no other person shall, after a day to be fixed by the Bill, sell certain dangerous drugs, to be scheduled in the Bill, unless he shall be examined and registered.

By the adoption of the second Resolution as an amendment to a proposal that persons compounding medicines from the prescriptions of medical men should also be examined, your Committee decided against the principal provision contained in the Chemists and Druggists (No. 1) Bill, and they accordingly resolved to proceed with the Chemists and Druggists (No. 2) Bill.

After several Clauses of the Bill were passed, considerable difficulty arose in providing for the first formation of the Council to which the duty of regulating the examination of Chemists and Druggists was to be intrusted; and your Committee, considering the advanced period of the Session, were compelled to abandon the expectation of any useful result from a further consideration of the Bill.

Having, therefore, disposed, *pro formâ*, of the remaining clauses, they came to the following Resolution:

"That inasmuch as there appears to be little prospect of any satisfactory termination to the labours of the Committee in the present Session, it is desirable that the Evidence, so far as it has been already taken, and the Proceedings of the Committee, be reported to the House, accompanied by a recommendation that the Government should, early in the new Parliament, bring in a Bill on the subjects referred to the Committee."

Your Committee have in conclusion to report, that, in their opinion, it is not expedient to proceed further with either of the Bills which have been committed to them.

19 June 1865.

PROCEEDINGS OF THE COMMITTEE.

Veneris, 5° *die Maii*, 1865.

MEMBERS PRESENT:

Mr. Baring.	Mr. Black.
Sir FitzRoy Kelly.	Mr. Roebuck.
Sir John Shelley.	Mr. Forster.
Dr. Brady.	Mr. Cox.
Mr. Hastings Russell.	

Mr. *Baring* was called to the Chair.

The Committee deliberated.

Resolved, That the Chairman be instructed to apply to the House for power to send for persons, papers, and records.

[Adjourned till Thursday next, at Twelve o'clock.

Jovis, 11° *die Maii*, 1865.

MEMBERS PRESENT:

Mr. BARING in the Chair.

Lord Elcho.	Sir FitzRoy Kelly.
Mr. Black.	Mr. Roebuck.
Dr. Brady.	Sir James Fergusson.
Mr. Schneider.	Mr. Cox.
Mr. Wynn.	Mr. Ayrton.
Sir John Shelley.	

Dr *Alfred Swain Taylor* and Mr. *John Simon* were severally examined.

[Adjourned till Monday next, at Twelve o'clock.

Lunæ, 15° *die Maii*, 1865.

MEMBERS PRESENT:

Mr. BARING in the Chair.

Mr. Schneider.	Sir FitzRoy Kelly.
Mr. Hastings Russell.	Mr. Roebuck.
Mr. Black.	Mr. Ayrton.
Lord Elcho.	Dr. Brady.
Mr. Wynn.	Sir J. Fergusson.
Sir John Shelley.	Mr. Charles Forster.

Dr. *Quain*, Mr. *Mackay* and Dr. *Wilson* were severally examined.

[Adjourned till Thursday next, at Twelve o'clock.

Jovis, 18° *die Maii*, 1865.

MEMBERS PRESENT:

Mr. BARING in the Chair.

Mr. Schneider.	Mr. Ayrton.
Mr. Hastings Russell.	Mr. Caird.
Mr. Black.	Sir J. Fergusson.
Mr. Wynn.	Lord Elcho.
Sir John Shelley.	Mr. Roebuck.
Sir FitzRoy Kelly.	Mr. Forster.
Mr. Sclater-Booth.	

Room cleared, and Committee deliberated.

Motion made, and Question proposed, "That no compulsory examination or registration under the Bills referred to the Committee should be required of persons now carrying on the trade of Chemists and Druggists"—(Mr. *Ayrton*).—Question put, and *agreed to.*

Motion made, and Question proposed, "That the Bill do provide that no person, after a day to be fixed by the Bill, shall, under a penalty, become a Chemist and Druggist, and exercise his trade in the compounding of medicines from prescriptions by medical men, or in the sale of dangerous drugs, until he shall have passed an examination"—(Sir *FitzRoy Kelly*).—Amendment proposed, to leave out the word "no," in order to insert the following words: "all persons at present carrying on the business of Chemists and Druggists shall be registered on payment of a moderate fee; and after a day to be fixed by the Bill, no person shall be entitled to register as a Chemist and Druggist, or assume any title purporting to be so registered, without having passed a certain prescribed examination"—(Lord *Elcho*).—Question put, That the word "no" stand part of the Question.—The Committee divided:

Ayes, 6.	Noes, 5.
Mr. Hastings Russell.	Lord Elcho.
Mr. Wynn.	Mr. Schneider.
Sir FitzRoy Kelly.	Mr. Black.
Mr. Sclater-Booth.	Sir John Shelley.
Dr. Brady.	Mr. Ayrton.
Sir J. Fergusson.	

Another Amendment proposed, to leave out from the word "no" to the end of the Question, in order to insert the words "other person shall, after a day to be fixed by the Bill, sell certain dangerous drugs, to be scheduled in the Bill, unless he shall be examined and registered"—(Mr. *Ayrton*)—instead thereof.—Question put, That the words proposed to be left out stand part of the Question.—The Committee divided:

Ayes, 5.	Noes, 5.
Mr. H. Russell.	Lord Elcho.
Sir FitzRoy Kelly.	Mr. Schneider.
Mr. Sclater-Booth.	Mr. Black.
Mr. Brady.	Sir J. Shelley.
Sir James Fergusson.	Mr. Ayrton.

And, the numbers being equal, the Chairman declared himself with the Noes.—Question put, That the words "other person shall, after a day to be fixed by the Bill, sell certain dangerous drugs, to be scheduled in the Bill, unless he shall be examined and registered" be there inserted.—The Committee divided:

Ayes, 5.	Noes, 5.
Lord Elcho.	Mr. H. Russell.
Mr. Schneider.	Sir FitzRoy Kelly.
Mr. Black.	Mr. Sclater-Booth.
Sir John Shelley.	Dr. Brady.
Mr. Ayrton.	Sir James Fergusson.

And, the numbers being equal, the Chairman gave his vote with the Ayes.

Words inserted.—Main Question, "That the Bill do provide that no other person shall, after a day to be fixed by the Bill, sell certain dangerous drugs to be scheduled in the Bill, unless he shall be examined and registered," put.—The Committee divided:

Ayes, 5.	Noes, 5.
Lord Elcho.	Mr. H. Russell.
Mr. Schneider.	Sir FitzRoy Kelly.
Mr. Black.	Mr. Sclater-Booth.
Sir John Shelley.	Dr. Brady.
Mr. Ayrton.	Sir J. Fergusson.

And, the numbers being equal, the Chairman gave his vote with the Ayes.

Motion made, and Question proposed, "That the Committee do proceed on this day week with the Chemists and Druggists (No. 2) Bill"—(Mr. *Ayrton*).—Question put, and *agreed to*.

Dr. *John Mackay* was examined.

Room cleared, and Committee deliberated.

[Adjourned till Thursday, May 25th, at Twelve o'clock.

Jovis, 1° *die Junii*, 1865.

MEMBERS PRESENT:

Mr. BARING in the Chair.

Mr. Forster.	Mr. Schneider.
Sir John Shelley.	Mr. H. Russell.
Mr. Wynn.	Lord Elcho.
Sir FitzRoy Kelly.	Mr. Roebuck.
Mr. Ayrton.	

Room cleared, and Committee deliberated.

The Committee proceeded with the Chemists and Druggists (No. 2) Bill.

Preamble postponed.

The Committee went through the Bill, Clause by Clause.

Clause 1 agreed to.

Clause 2 postponed.

Clause 3 amended.

Question put, "That the Clause, as amended, stand part of the Bill."—The Committee divided:

Ayes, 4.	Noes, 2.
Mr. Schneider.	Mr. Wynn.
Mr. Forster.	Sir FitzRoy Kelly.
Sir J. Shelley.	
Mr. Ayrton.	

Clauses 4, 5, 6, and 7, amended, and agreed to.

Clause 8 amended, and postponed.

[Adjourned till Monday, June 12, at Twelve o'clock.

Lunæ, 12° *Junii*, 1865.

MEMBERS PRESENT:

Mr. BARING in the Chair.

Mr. Wynn.	Mr. Cox.
Sir John Shelley.	Sir James Fergusson.
Sir FitzRoy Kelly.	Mr. Forster.
Mr. Sclater-Booth.	Mr. Schneider.
Lord Elcho.	Dr. Brady.
Mr. Ayrton.	

Chemists and Druggists (No. 2) Bill.

Clause

Clause 8 put, and *negatived.*

Remaining Clauses put, and *negatived.*

Preamble passed.

Ordered to Report.

The Committee deliberated.

Motion made, and Question, "That Mr. Buolt be called in, and examined"—(Mr. *Schneider*)—put, and *negatived.*

Motion made, and Question, "That inasmuch as there appears to be little prospect of any satisfactory termination to the labours of the Committee in the present Session, it is desirable that the Evidence, so far as it has been already taken, and the Proceedings of the Committee, be reported to the House, accompanied by a recommendation that the Government should, early in the new Parliament, bring in a Bill on the subjects referred to the Committee"—(Lord *Elcho*)—put, and *agreed to.*

Resolved, That the Chairman be instructed to apply to the House for leave to make a Special Report.

[Adjourned till Monday next, June 19th, at Twelve o'clock.

Lunæ, 19° *die Junii,* 1865.

MEMBERS PRESENT:

Mr. BARING in the Chair.

Mr. Black.	Mr. Ayrton.
Mr. Wynn.	Mr. Roebuck.
Sir FitzRoy Kelly.	Sir John Shelley.

Special Report, proposed by the Chairman, read 1° and 2°, as follows:

"Your Committee have examined Dr. Alfred Taylor, and Mr. Simon, Medical Officer of Health to the Privy Council, on the general questions raised by the provisions contained in the two Bills committed to them, and have heard evidence in support of the Chemists and Druggists (No. 1) Bill.

"1. Having examined Dr. R. Quain, Dr. Wilson, and Mr. Mackay, your Committee passed the following Resolutions:

> "1st. That no compulsory examination or registration under the Bills referred to the Committee should be required of persons now carrying on the trade of chemists and druggists.
>
> "2d. That the Bill do provide that no other person shall, after a day to be fixed by the Bill, sell certain dangerous drugs, to be scheduled in the Bill, unless he shall be examined and registered.

"2. By the adoption of the second Resolution as an amendment to a proposal that persons compounding medicines from the prescriptions of medical men should also be examined, your Committee decided against the principal provisions contained in the Chemists and Druggists (No. 1) Bill, and they accordingly resolved to proceed with the Chemists and Druggists (No. 2) Bill.

"3. After several Clauses of the Bill were passed, considerable difficulty arose in providing for the first formation of the Council to which the duty of regulating the examination of Chemists and Druggists was to be intrusted; and your Committee, considering the advanced period of the Session, were compelled to abandon the expectation of any useful result from a further consideration of the Bill.

"4. Having, therefore, disposed, *pro formâ,* of the remaining clauses, they came to the following Resolution:

> "'That insamuch as there appears to be little prospect of any satisfactory termination to the labours of the Committee in the present Session, it is desirable that the Evidence, so far as it has been already taken, and the Proceedings of the Committee, be reported to the House, accompanied by a recommendation that the Government should, early in the new Parliament, bring in a Bill on the subjects referred to the Committee.'

"5. Your Committee have in conclusion to report, that, in their opinion, it is not expedient to proceed further with either of the Bills which have been committed to them."

Special Report amended, and *agreed to.*

Question, That this Report be the Report of the Committee to the House—put, and *agreed to.*

Ordered to Report.

EXPENSE OF WITNESS.

NAME of WITNESS.	Profession or Condition.	From whence Summoned.	Number of Days absent from Home, under Orders of Committee.	Expenses of Journey to London and back.	Allowance during Absence from Home.	TOTAL Expenses allowed to Witness.
				£. s. d.	£. s. d.	£. s. d.
John Mackay - - -	Chemist - -	Edinburgh - -	10	7 - -	10 10 -	17 10 -

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MINUTES OF EVIDENCE.

LIST OF WITNESSES.

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MINUTES OF EVIDENCE.

Jovis, 11° die Maii, 1865.

MEMBERS PRESENT:

Mr. Ayrton.
Mr. Baring.
Mr. Black.
Mr. Sclater-Booth.
Dr. Brady.
Mr. Cox.
Lord Elcho.
Sir James Fergusson.
Mr. Charles Forster.
Sir FitzRoy Kelly.
Mr. Roebuck.
Mr. Hastings Russell.
Mr. Schneider.
Sir John Shelley.
Mr. Charles Wynn.

THOMAS GEORGE BARING, Esq., IN THE CHAIR.

Dr. ALFRED SWAINE TAYLOR, called in; and Examined.

Dr. *A. S. Taylor.*

11 May 1865.

1. *Chairman.*] WHAT station do you occupy?—I am Professor of Medical Jurisprudence and Chemistry at Guy's Hospital, an office which I have occupied now for about 34 years.

2. I believe you have paid great attention to questions connected with the sale of poisons?—Yes, I have.

3. You made a report two years ago on the subject of poisons, and the dispensing, vending, and keeping of poisons?—Yes, I did.

4. Which was published in the Sixth Report of the Medical Officer of the Privy Council?—Yes, it was.

5. Can you inform the Committee to what extent you think injury is occasioned by the carelessness and incompetence of persons vending drugs?—There is by far too great a facility for persons to obtain poisonous drugs and to use them for improper purposes.

6. Do I understand you to say that by the carelessness of persons who vend drugs injury to the public arises?—Yes, I believe so.

7. To what extent?—I can hardly define the extent; there are many cases which do not prove fatal, and of course it is impossible to get at the whole history of those cases; but I have been frequently consulted where drugs have been sold by persons who are incompetent to know the nature of them, in some cases where they have destroyed life, and in others where they have not destroyed life. In that report, I have referred to a great number of cases that have come before me.

8. In this report you gave several cases in which people asking for medicines, which at any rate would have been not injurious to health, have, by carelessness or ignorance, been supplied with medicines which in some cases have been fatal to life?—Yes, they have; by one substance being mistaken for another.

9. You are aware, I believe, of the present state of the law in respect to the qualification of chemists and druggists?—Yes, I am. I am generally acquainted with the requirements of the Pharmacy Act.

10. Under which, generally speaking, no restriction is placed on the sale of drugs by any person who chooses to keep a shop for their sale?—With the exception of arsenic. There is an exception with regard to arsenic.

11. But with regard to no other drug?—But with regard to no other drug, so that a person can obtain any poisonous drug he pleases; it depends entirely on the conscientious feelings of the seller to supply him or not. I believe a great number of these exist in the chemist and druggist trade; the better class of druggists put great difficulty in the way of obtaining these poisonous drugs; some do not sell them at all. I have tried in Edinburgh to procure a common poison, cyanide of potassium, but they refused to let me have it until I explained who I was, and gave some reason for obtaining it. The sale of these substances is not so much with the higher class of chemists and druggists as with the lower class, where oxalic acid, and substances of that sort, can be obtained in common shops; grocers, oilmen, and persons of that kind.

12. Is it also within your knowledge that it has happened on several occasions that drugs have been accidentally mixed with other substances, and thereby occasioned danger to life?—It is so.

13. In consequence of the shop of the person who sells the drugs being also used for the sale of other articles?—That is so; fatal mistakes have

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have been made from keeping them together on the same shelf and in the same drawer.

14. There was a case you mentioned in this report of opium being supplied instead of rhubarb?—Yes.

15. Substantially from the word "Turc" being on the label?—That was from the entire ignorance of the person who sold it. He thought "Turc" meant rhubarb, instead of meaning that the substance came from Turkey.

16. Has it come under your knowledge that any danger to the public has arisen from incompetent persons preparing the prescriptions of medical men?—Yes, it has.

17. Will you state any case?—One case I mentioned in the report of an assistant in a shop, supplying arsenic instead of calomel; it led to a death, and a trial at the Old Bailey. He was a dispenser in a shop; I believe the accident arose from his being in a hurry, and from the fact that there was arsenic, in powder, near to the calomel in the shop at this time; a mere accident. At the same time there was a great want of caution in supplying arsenic for calomel. There was a want of caution in keeping the arsenic near the calomel, and great ignorance, and great want of knowledge in a man weighing out arsenic for calomel.

18. You think some restriction on the sale of drugs is advantageous for the protection of the public?—I do, indeed; I am strongly impressed with that, from the number of cases that have come before me, and where persons have not died, but recovered. They have brought bottles to the laboratory at Guy's Hospital, and have asked for an examination. When I have made inquiries, I found they got the medicines in some low shop where persons are allowed to sell these things; selling laudanum for tincture of rhubarb, and so on; one is frequently mistaken for the other, not by competent druggists, but persons who are allowed to sell these drugs like druggists.

19. What is the nature of the protection you would recommend?—I had sent to me, with reference to this question, two bills, which I then saw for the first time.

20. We should prefer your not going into the bills, but stating your own views?—I am prepared to say, from looking over the matter, I think it would be possible to construct a measure which would protect the public, improve the profession, and give the medical profession a certainty that their prescriptions would be well carried out.

21. Am I to understand the suggestions you made in this report, which I hold in my hand, are those which you would advocate?—They are substantially the conclusions and suggestions at the end of the report.

22. Perhaps you will be kind enough to read them?—I will; and make any remarks, if you will allow me, as to any alterations. The first suggestion is, "That none but qualified persons educated to the trade of druggists should be allowed to vend, by retail, drugs or medicines capable of acting as poisons."

Mr. *Roebuck.*] Meaning in every part of the country "capable of acting as poisons." Then, secondly, "That the sale of poisonous drugs by chandlers, grocers, oilmen, drapers, or small shopkeepers should be strictly prohibited." I put the word poisonous.

23. *Chairman.*] Upon that second suggestion, may I ask whether you think there would be any insuperable difficulty in inserting in a schedule those drugs upon which you would wish to put a prohibition in regard to the sale?—I do not think there would be. I have considered a schedule in my own mind which I am prepared to lay before the Committee. Then the third conclusion is, "That the sale of arsenic, strychnia, and other specified poisons should, after a certain date, be restricted to pharmaceutical chemists and licentiates of the Apothecaries' Society." By pharmaceutical chemists I do not mean any particular class, but those persons who are properly educated and men of experience; those who have undergone an examination; those who have been regularly instructed in the nature of drugs and their properties. "Any other persons acting as druggists not to be permitted to sell them until they have proved their knowledge of poisonous drugs by undergoing a proper examination." This, I think, is a *sine quâ non* with regard to the safety of the public, the certainty as to medical prescriptions, and the proper status of the druggist's profession. Then, fourthly, "Under no circumstances should boys or girls, or persons who cannot read or write, be permitted to sell poisonous drugs." I think this will be undisputed. There have been several cases where boys have been allowed to sell poisons, and serious consequences have followed; they have mistaken one thing for another. Then, fifthly, "Some rules are required for the management of a licensed retail trade in poisonous drugs. No youth should be allowed to sell them who is not above the age of 18 years, and who has not been at least one year engaged in the practice of pharmacy under a pharmaceutical chemist or licentiate of the Apothecaries' Society. This restriction not to be applied to one who has passed an examination either at the Pharmaceutical Society or at Apothecaries' Hall, as to his knowledge of poisonous drugs, or, at any rate, passed an examination somewhere, to show his knowledge of them. I do not wish to limit it to the Apothecaries' Company or to the Pharmaceutical Society; any properly constituted body would meet my view. Sixthly, "That poisonous drugs and medicines having a similar colour and appearance should not be kept near to each other in similar bottles, drawers, or boxes, with similar labels." Seventhly, "That less facility should be given for the purchase of arsenic, strychnia, and other deadly poisons which can be used for the purpose of suicide or murder." Eighthly, "That no poisonous drugs should be sold to girls or boys, under the age of 20 years, on any pretence whatever; and that, in all cases of purchase or sale, there should be a witness of adult age. Ninthly, "All poisonous drugs sold should be distinctly labelled with the name of the drug, the address of the vendor, and the date of sale." Tenthly, "That noxious substances, such as arsenic, corrosive sublimate, sugar of lead, and tartar emetic, and others of the like nature, when stored in large quantities, in casks or packages, should be distinctly labelled, and kept apart from other substances of an innocent kind which they resemble." That, I may observe, I introduced on account of the cases of poisoning by arsenic which occurred at Bradford, in Yorkshire, some years ago: 120 persons were poisoned by some lozenges, and from 12 to 17 died from the effects of the poison. There the person who sold it was not able to distinguish arsenic from plaster of Paris.

24. The

24. The two things being placed together in the same loft?—And it so happened the label was underneath, where the person could not see it, until after the occurrence. These are all of the conclusions.

25. There is one other point to which I think you attach some importance, namely, some definition of what is gross or culpable negligence in respect of the careless sale of drugs?—Yes.

26. Can you explain why you consider something of that kind necessary?—It is because the trials where I have been present, and others which I have read or had communicated to me, have been cases where it was apparent to my mind that there has been much negligence, but which the learned judge did not consider to be culpable negligence. There was a difficulty in the Bradford case; the confectioner was tried and acquitted. It was thought he was not culpable; and no culpability could be fixed on any one, although there was great negligence which had led to the destruction of life. My conclusions were based on these occurrences being rather the results of carelessness or ignorance; with a view that the lives of persons might not be exposed to such great risks, and at the same time no person——but perhaps you will allow me to read the paragraph.

27. If you please?—"In nearly all cases which are the subject of inquests or trials for manslaughter, it will be observed that proof of negligence is not sufficient; the proof must amount to gross or culpable negligence in law, or the wrong-doer will escape." I suppose it is a legal point that a little accident may be allowed for; it must be of a gross and culpable nature. It is not for me to decide that, but it is for the learned judge who tries the case; but I have remarked that there has been extreme danger to life, death caused where there was negligence, although it did not come up to gross or culpable negligence, and it did not amount to manslaughter. These cases would have been avoided altogether if there had been such a measure as that which you suggested, namely, of having competent persons to deal with these things. This is the great remedy to prevent such accidents from occurring.

28. Apart from the question as to defining what culpable negligence would mean in such cases, you would provide persons the least likely to show negligence?—That is what I intended. I should mention another instance to the Committee. In one morning upwards of 300 cases of poisoning by arsenic came before me at once from an industrial school near London. A messenger brought to me the material that had caused the illness. On examining it, I found it to be a strongly saturated solution of arsenic; and, on going into the history of the case (I think there were 370 children made ill), I found that arsenic had been mixed with the milk, and each child had taken about a grain of the poison. Many pounds of arsenic had been put into a steam-boiler with soda, the whole had been allowed to mix, and the water had been drawn off from the steam-boiler to mix with the children's milk: 370 children suffered from the effects of the arsenic. Fortunately they all recovered, at different periods, by vomiting and treatment. On going into the matter, which I laid before the Secretary of State at the time, it was found that nothing could be done, because the arsenic had not been sold; it had been used by some engineer for the purpose of removing the fur from the steam-boiler. The man had used a large quantity to clean off the fur, had given no information about it, and thus led to the accident. I do not know that legislation could meet all these cases, but I attribute this accident to carelessness in not having given a proper intimation of the nature of the liquid. There was negligence on the part of no one, because it did not amount in law to culpable negligence.

29. That was a case which no legislation could have met?—I think it would meet it in this way, that substances of this nature should be properly labelled, and the nature of them fully understood by those to whom they were handed. It is a question of dealing with arsenic, and knowing whether it is arsenic or not.

30. Sir *FitzRoy Kelly.*] I think you said you had a large experience in the consideration of this subject?—I have.

31. How many years?—Thirty-four years; since 1831.

32. And have, during the whole of that time, given a great deal of attention to these questions?—I have, and deeply lamented that there was not some legal contrivance for preventing the frequent occurrence of these cases; I think, in the time I have mentioned to you, I have seen, certainly, more than 100 cases of death from arsenic, independently of a great number that have occurred from other poisons; I am not prepared to give you the dates of the cases, but I am prepared to say, generally, it was my strong impression, at the time, that some Act to prevent too great freedom in the use of drugs of this description would have saved a great number of lives and prevented criminal trials.

33. Are you aware there is now no check or restriction, by law, upon any persons calling themselves chemists and druggists, and not only dealing with poisons and poisonous substances, but in the making up of medical prescriptions?—Yes, I am; any person may. There is no prohibition on any person in this country opening a shop, calling himself a chemist and druggist, putting coloured bottles in his window, and holding himself out as a fit person to deal with.

34. For both purposes; for poisonous matters, and for making up medical prescriptions?—Yes.

35. Are you of opinion that the safety of the public requires that some measure should be resorted to for securing competence, and a sufficient degree of knowledge on the part of persons becoming chemists and druggists?—I am, decidedly; I think it is as important, and perhaps more important, that it should be, than even with reference to the practice of medicine. It is as important to have medicines served by competent persons as to have them prescribed.

36. Now, independently of some measures which you have pointed out in your evidence, enabling those dealers to distinguish, by a kind of bottle, and so forth, as to the nature of the different substances or articles in which they deal, what measure should you be disposed to recommend to secure a competent degree of skill and knowledge and experience in the chemist and druggist, who has either to deal with poisons or poisonous substances, or to make up the prescriptions of medical men?—I think on no account should there be allowed the practice you have described, of either retailing drugs of a dangerous nature, or to make up medical prescriptions, except under the restriction of an examination. I would not have the examination too severe, or make it too close, but it should be such a practical examination that a man should be able to

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state, when drugs are put before him, what they are and their uses, and should know them; he should also be examined in his knowledge of Latin, and be able to interpret the weights and measures, and to translate freely.

37. I will not trouble you with any question as to the precise nature and extent of the examination; but are you, from your knowledge, experience, and also from the attention you have given to this subject, perfectly satisfied that the public safety requires that some such test should be applied by some kind of examination for persons who are permitted to carry on the trade of chemists and druggists?—I am strongly of that opinion. I have an objection myself, to having medicine made up by persons I describe, unless I know something of the locality, and the person who is the druggist.

38. And you express that opinion, as regards dealing with drugs of a dangerous character, and the making up of the prescriptions?—I do; I apply that observation to both.

39. Have you at all considered anything with regard to the general education of persons who become chemists and druggists?—Yes; I have given my attention to that.

40. Do you think some qualification in the way of education would be required?—I think so.

41. Distinguishing between accidents or mistakes which may arise from mere negligence, do you think it is necessary in the way you have pointed out, or by some such manner as you have pointed out, to secure the public against negligence and ignorance?—Yes, I do.

42. Has that been your opinion as the result of the long experience and observation of which you have spoken?—It has.

43. Sir *John Shelley.*] I think the substance of your evidence goes to this: that you think, as far as it can be done, it would be advisable that all persons, not only selling the poisonous ingredients, but selling drugs also, should pass some kind of examination?—No, I do not go quite to that extent.

44. Perhaps you will explain to the Committee?—For instance, I see no harm in unexamined persons selling Epsom salts and articles of that sort; but I say, with regard to all drugs or medicines which are likely to affect life, there should be restriction. I would not restrict the selling of castor oil or Epsom salts. I cannot draw the distinction between a poison and a medicine, but I can point out, from my experience, what has caused death during the last 30 years. I could suggest to you what I believe would create a great amount of safety, if restrictions were placed on certain articles.

45. And you would be anxious to bear in mind, not to interfere unnecessarily with trade generally?—I would; I should say unexamined persons might be allowed to sell such articles as are now sold in warehouses; sulphur, and articles of that sort.

46. In what way would you draw the line between the person in the village who would be permitted to sell the common things which you admit may be sold without any restriction, and the persons you would define as chemists and druggists, and who would have the sale of things other than absolute poisons like arsenic, morphine, and so on?—I should prefer, as a condition of legislation, that some date should be fixed, after which all dealers in drugs should undergo an examination. The observations made as to Epsom salts, is that one need not unnecessarily interfere retrospectively with a trade that has grown up and been established many years for the supply of country places; I think you could do it without injury to the trade, and with benefit to the public, by fixing a date after which all dealers in drugs must undergo an examination.

47. That would be prospectively?—Yes.

48. You see a difficulty in legislation affecting the persons now actually carrying on any trade?—And the difficulty of defining a drug.

49. Under the term drug, do you simply mean the trade of selling what may be called physic?—Yes, medicine.

50. What do you do with the person who sells an article largely employed in trade, which in itself may be of a poisonous nature; for instance, if I may suggest it, for cleaning hunting boots, there is a material used?—Oxalic acid.

51. How do you deal with the general trade?—Do you mean retrospectively?

52. First of all retrospectively?—I would say that oxalic acid is one of the substances that should not be sold by anybody but a competent person; one who had been examined, or who had conducted the business of a chemist and druggist. I would take this away from all other shops.

53. If it is retrospective it is prospective; from and after a certain day no person shall be allowed to sell this article required in trade unless they have gone through some examination?—Decidedly so. I have put down here a list of subjects; and what I was prepared to suggest to the Committee was an arrangement for the present. Owing to the trade that has risen up, it would be difficult to interfere with persons who already are selling these articles, except by restricting the sale so as to exclude a certain number of substances which are here, by which I think the lives of the public would be endangered.

54. The case you alluded to, the poisoning of the children, if I understood it, was from this: some article was used for the cleansing of the boiler and getting rid of the fur in the boiler?—Yes.

55. Would you say, with regard to matters of this kind, which cannot in any way come to the question of physic, that no person should be allowed to use that without having previously gone through an examination?—I would not wish to restrict the use of it; but those who sold it for use should be put under a strong restriction regarding the sale of it.

56. Even for such a purpose as that?—I think our lives require it. Probably there are 550 deaths every year in this country from poison. I think our lives require that these things should not circulate about as easily as they do.

57. Do you see your way to any legislation which shall do what you wish, namely, protect the public from the risk of being poisoned without materially interfering with the general trade of the country?—I think we might; there are one or two matters that you should except, but there are eight or nine, or ten substances which have nothing to do with trade, or very little; the public should not be allowed to purchase them. Any person, for 3*d.*, may now buy strychnia enough to poison any one he pleases. It is not sold as strychnia, but under the name of "mouse poison,"

58. But, with regard to the sale, therefore, in an out-of-the-way village, I understand you to say that although you put no restriction, but let anybody sell common things in common villages, the

the person selling it to them must be responsible? —I would except such subjects as I have just mentioned. I would only allow those persons retrospectively to deal in articles which could not materially injure life or produce the effects of poisoning. I would give them free trade in all articles except a certain number; but, with regard to future legislation, I think it would be wise to fix a day from which date no person should deal in drugs, taking them generally, for medicinal purposes, without having undergone an examination.

59. It is as regards the future which I would rather talk of, as we are all agreed as to the past; you go further, for I understood you to say not only shall the persons selling the drugs, or the persons who are to deal in them in a village, go through an examination, but the actual dealer in the outside village, selling all sorts of things, shall not be allowed to do so without having gone through an examination as chemist and druggist? —Without having shown his knowledge of drugs.

60. So I understand?—Your observation would apply to the prohibition, which would be injurious to the poor, of not allowing the sale of such articles as castor oil or Epsom salts, magnesia or rhubarb, or things of that sort; I do not think there is any difficulty in that: the only object is to protect life and prevent crime. I think some clause might be introduced to the effect that such persons should not deal with the articles in a list unless they had had some education in that particular business.

61. That would apply to the rural districts principally?—To many of them.

62. Would you make it apply to anything under any circumstances that could be poison?— I should not do so; I have a list here.

63. Will you be good enough to read that list? —I may tell you that in France there are 19 articles prohibited; that is, putting the vegetable alkalies as one article. These substances were prohibited by the law of 1850, which the present Emperor has modified; before that, there were many more comprised in the list, which have since been struck out. Those which I have in my list have been taken from a great number of cases which have come before me; arsenic, corrosive sublimate, the poisonous alkaloids; I have not mentioned the separate names of these: a man who deals in drugs ought to know them exactly and be able to distinguish them. Prussic acid, essential oil of bitter almonds, chloroform, oxalic acid, salt of sorrel (a compound of oxalic acid), and nux vomica; tincture of aconite; tincture of colchicum; cantharides or Spanish flies; and cocculus indicus. Then there are three substances which raise a difficulty, two of them are poisons, and one a most frightful poison; the difficulty is with regard to placing any restriction upon its sale, because it is very largely used for innocent purposes, and can hardly be dispensed with. I am afraid restrictions upon it would give rise to a good deal of inconvenience; I allude to cyanide of potassium; I may call it solid prussic acid, that will be the better name to give it; two or three grains of it would be sufficient to kill a person speedily; it is one of the most fatal poisons we have; I may call it prussic acid in a solid state. As cyanide of potassium is largely employed in electro-plating and in electro-gilding, as well as in photography, and also employed by chemists for various purposes, it presents a difficulty. I need hardly say that it is desirable to have it sold only by educated men; and I think the Committee would see no difficulty in excluding the sale of it from such ignorant persons as we have described, in low villages and shops of this description. The keeping of it there might give rise to accidents, and I am of opinion it is at present difficult to obtain this substance from small shops. It is kept by the higher class of druggists, who know its use, and therefore I put this substance before the Committee as its extensive use presents one of the most difficult cases for legislation; but it is a deadly poison and destroys life rapidly. Another substance, opium, is one that has given rise to difference of opinion. You will observe, probably, that I have not mentioned opium or laudanum in the list. I purposely omitted it, because I have had occasion to consider the views on both sides regarding it; the necessity of supplying laudanum in small shops. I still think it would be for the safety of the public generally if this substance should not be allowed to be sold except by persons who have undergone an examination. It should not be allowed to be sold in small villages by general dealers and persons of that description. I may say, that a friend of mine very nearly lost his life. He sent to one of these village shops near Windsor for an ounce of tincture of rhubarb. It was laudanum that was sent to him. Any person educated in pharmacy would have known the distinction immediately by the smell, but the ignorant woman sent an ounce of laudanum. He had a narrow escape of his life, and has not been to a village shop since. I now come to another article; and that is a substance only recently discovered or comparatively recently discovered, and which is now largely used with reference to the aniline dyes, nitro-benzole. It is a very powerful poison in some respects. It has some of the character or smell of the oil of bitter almonds. I had a case of poisoning with it lately referred to me. It was sold for the purpose of giving a flavour to confectionery, and it acted so quickly on the person who took a small quantity that he died a short time after. The difficulty about this poison is this; a person may take it and appear to be well for some hours, as if nothing was the matter with him. There was a coachman who went into the kitchen where the cook used this in place of oil of bitter almonds for flavouring pastry, and, after tasting it, he did not appear to suffer any ill effects. The man jumped on the coachbox and took his master for a drive; it was only on returning home, some time after he had tasted this liquid, that he felt very ill, and he soon died. This liquid would not probably get into common use, because it could not be given to a person without his knowledge, as it has a peculiar smell. It is a dangerous substance to be allowed to be kept by uneducated persons. I cannot see my way exactly between fettering commercial liberty in obtaining a thing like this in quantities for manufacturing and at the same time protecting life. I do not wish to fetter commerce. It has been a result of my practice to see a large number of deaths from poison, and I am more impressed with the necessity of seeing something done to prevent these deaths from occurring.

64. May the Committee take it as your opinion that there are certain things that there would be no doubt whatever there should be strong restrictions against selling?—I do.

65. There are other things, much used in trade and commerce which may be difficult to deal with?—Yes.

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66. And others in which you are of opinion there should be an interference in the sale of them?—That is my view; and I do not see why it should not be done. All I suggest is this, that you should not allow such dangerous substances to be in common hands; they should only go through the hands of skilled people. I think, with regard to cyanide of potassium, an experienced chemist and druggist, such as I have pictured to my mind, might be permitted, on reasonable grounds, without the restrictions which I put on certain other things, to sell it if required for chemical or trading purposes. I do not see, if you start with this proposition, that legislation would be very difficult. If you allow these articles to be in the hands of uneducated persons, I do not see how the matter can be dealt with so as to save public life.

67. What you say with regard to chemists and druggists would apply to assistants also?—Yes, it would. I should think an assistant who has been in a druggist's shop a certain time would acquire quite sufficient knowledge.

68. I suppose you would say anything that took the chemist for a length of time out of his shop, leaving the carrying on of his business to a young man or woman, is objectionable, as regards the public?—It would be if the assistant was not competent.

69. Do you think it would be advisable, under those circumstances, to relieve persons carrying on the trade of a chemist and druggist from selling drugs that are injurious?—I think it would.

70. Mr. *C. W. W. Wynn.*] Your evidence has been directed to persons selling drugs, not as to persons purchasing them?—No.

71. That would form the subject of another paragraph?—It is given in the conclusion: that there should be restrictions as to the age of persons to whom it is sold, and the age of the vendor; and certainly that the sale should be in the presence of an adult witness. I have a case in my mind, tried before Lord Denman, where the difficulty was this: there was a selling of the arsenic in the presence of a witness, but it was a child of three years old, who could say nothing on the trial about it. The case fell through because of a want of clear evidence of purchase. I would say, with regard to the restriction on the sale of any of these substances, there should be an adult witness, a certain age for the seller and a certain age for the person to whom the poison is sold.

72. You have alluded to arsenic, which you would prevent the sale of; are you aware that it is very largely used in the village shops for mixing with seed wheat; you object to that, I presume?—Yes.

73. Sulphate of copper and nitrate of copper; do you prohibit both of those?—No, I would not; sulphate of copper is not an active poison, and a person would know it immediately by the taste; it acts as a powerful emetic. Sulphate of copper, I believe, is largely used for the destruction of the spores of fungi as well as arsenic. If all substances were as safe as sulphate of copper, which has an effect on the stomach, we should not have had the discussion of late which we have had. The worst of arsenic is that it is almost tasteless, and it is white and mixes with anything. Although the Act says it is to be coloured blue or black, that Act is avoided to my knowledge. In the case of a man who was tried and convicted of murder at Cambridge, a pound and a-half of white arsenic was found in his pocket.

74. Vermin are killed with arsenic?—They are; formerly there was much arsenic used; now strychnia is used.

75. Those you would prohibit?—I would as much prohibit them as the sale of anything. When I say prohibit, I prohibit the sale of them except under restrictions and strong precautions. It may be necessary to destroy vermin in barns. The complaint now is, that any person may go into a grocer's shop or into a chandler's shop and get enough poison to kill a person for a penny or two pence without any indication on the part of the vendor of what is being sold. That is what I would stop. They should not be sold so freely as they are now. I gave evidence at a trial in Lincolnshire before the Lord Chief Baron, where a girl of only between 13 & 14 years of age had gone into a village shop and merely asked for "a vermin powder," had put down 3*d.* She gave it to a child and killed it in an hour or two. That girl had been nursing at other places, and it is supposed she killed one or two children with strychnia in the same way.

76. How do you propose to deal with the question of the wholesale warehousemen; would the wholesale warehousemen be examined?—No.

77. That would be another difficulty?—I would not say that.

78. How far do you mean to carry your examination?—It should include those who sell these articles by retail, especially those who make up prescriptions. The articles should be labelled, and care taken, in passing them from hand to hand, that certain precautions are observed.

79. Up to the present time, you are speaking of poisoning accidentally?—And as to the facility of obtaining these substances for poisoning criminally.

80. I would now call your attention to the sale of a poison for general purposes, and to the chance of persons obtaining it under a pretext of wanting it for a general purpose, and using it for a special purpose?—Will you allow me, while it is in my mind, to mention we have referred to the Bradford case, and that is a remarkable instance of what you have said.

81. In the barrels?—Yes. With regard to that, it was not my intention to suggest that the man who kept arsenic with plaster of Paris should be examined; I do not think that would be necessary. Whoever kept or sold arsenic ought to be compelled to have it labelled, or to have its poisonous nature indicated in some way. I would say, with regard to that case, it was negligence, but not culpable negligence. I think the storing of arsenic might be a matter of legislation for the safety of the public, without rendering it necessary for ignorant people to go through the discipline of an examination.

82. Mr. *Black.*] You admit there were about 550 who were killed by poisons which had been administered; are you aware what amount of those were accidental, or whether it was from the pure ignorance of parties who administered them?—We have no means of ascertaining that; I have made the statement from the Returns of the Registrar General; and I may tell you coroners' inquests are imperfectly conducted. The object is to determine the cause of death, not the mode in which a poison has been administered, whether by accident or by design. There are no records of

of coroners' inquests with regard to facts of this kind.

83. I ask that, suppose you had the parties examined, and they were persons who understood the nature of the drug, yet they may fall into the same accident as if they were imperfectly acquainted with the nature of the drug?—Yes; I am afraid statistics will hardly help us; I have endeavoured to get in every way statistics of poisons. As you are aware, there is no authorised publication; the Registrar General's Returns are defective. For the 35 years I have been engaged, I have had at least 16 exhumations of dead bodies where the deaths were from poisons, and verdicts have been returned of cholera, fits, and a variety of causes.

84. There are districts in the country where the population is thin, and where they are poor, and where a person who had undergone such an examination as is pointed out by this Bill could not exist; he would have as much trade as would keep him alive, and therefore in such places as these you must find some person perfectly acquainted with drugs where people can get either Epsom salts or such articles as laudanum, for example; how would you do with that?—That is what I presented to you as a difficulty, undoubtedly. There is a demand for laudanum in all parts of this country; it is only a question whether that article is to be excluded or included in the list. I cannot conceive that there would be any urgent want of prussic acid or strychnia for medicine, but there would be time to get it from a town, as by means of communication by railway; there would be no difficulty. I quite agree, that in Wales and other places where the population is scattered, persons would have to go some miles to druggists who keep these things; but you might give the power of selling all articles not injuring life, and you might include chemists and druggists. It is a question whether the injury done to society, by children, and adults being killed by such facilities in selling poisons can be compared with the amount of injury that would be done by restricting the sale. I named opium, and the facilities for getting opium are such that the lives of children are now very extensively destroyed. It is owing to the facility of obtaining this drug. If the destruction of life is not to enter into the consideration of this matter, it might be obtained as it is now. The practice is carried on only at the expense of a great destruction of human life.

85. If a Bill of this kind were passed, would it not establish a monopoly?—I think it would. I think a good deal might be made out of the two Bills.

86. Would not the passing of either of these Bills interfere with any of the other surgical or medical bodies of the kingdom?—No, they would not.

87. The College of Surgeons at Edinburgh?—No, I do not see that they would; the only branch of the profession who would be affected by it are the members of the Society of Apothecaries. There are men who belong to the Apothecaries' Society who sell drugs by retail, and who also prepare medical prescriptions; but, I believe, the number is now small, and it is not carried on to any great extent. I do not see that this Bill would interfere with those branches of the medical profession.

88. Lord *Elcho.*] You have referred to the case of laudanum that it might be difficult, and that it was a question of balance on the whole by allowing the sale of it?—Yes.

89. Are there no other drugs to which that would apply; take chloroform, that is in very general use?—Yes.

90. Now, it would be desirable to use that in the same light?—No. I have in my mind only lately a case where it was ascertained a lady lost her life. I think it is a most dangerous thing for people to prescribe for themselves, or use for themselves.

91. In case of accidents?—Then it should be given by another person. I understood your question to be this, that chloroform should be open to purchase as freely as spirits of wine. I should say, certainly not. It not only affords a mode of murder to a great extent, but it kills more rapidly than many other drugs. With regard to the lady alluded to, she was found dead in her bed; her handkerchief was applied to her mouth. After a time the power of removing the handkerchief was gone, and so she died in that way. I should say it is certainly a drug that would not be wanted in manufactures, and it would be most unsafe to allow its sale except on the prescription of a medical man, or of some person conversant with its properties.

92. With regard to the regulations in France, you said there were 19 articles?—I have a list.

93. Is their sale absolutely prohibited?—No, not absolutely prohibited, except to a certain class of pharmaciens. According to my recollection, they are what are called the general pharmacien, who may practice all over the country. There is a different style of examination, and these drugs are allowed to be sold under certain restrictions, by entering the name and date in a book, and matters of that kind; but they cannot be obtained by the public in the same easy way that they can from any shop in this country. I see they have got a number of substances which I should not think it necessary to put in our schedule. Among others, ergot of rye, although used for the purposes of abortion, it would not be entered as a dangerous poison in any way.

94. How is laudanum dealt with in France; is it one of the 19 articles?—It is; when I say laudanum, I am in doubt, without my French book to refer to; it is opium and its extracts. I believe it applies to the sale of opium generally.

95. A Member of the Committee wishes to know whether you consider ergot of rye might be left out of the list?—I think it might be safely; I mean not to restrict its use. Ergot of rye has been used for the purposes of abortion, but it requires to be used in large quantities, and no person can take it without knowing it; it is not a thing that could be given to a person easily.

96. Are you aware whether in France these regulations for the safety of the lives of the public are attended with any inconvenience or much inconvenience, as to the difficulty of getting articles generally?—It does to some extent. I was in France last summer, and took the opportunity of making a little inquiry about it. Considering the great freedom we have, and which we have enjoyed in this country of purchasing everything everywhere, it would be considered a great restriction to go through so many formalities, and to go to a particular shop to get a particular article. I had some difficulty in a French town, but when I represented myself as a member of the profession they gave it me. It might here be

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be felt as inconvenient for weeks or a year afterwards. There is in France a great interference with freedom of trade; with us there is a great destruction of life, that is my strong impression.

97. The people in France are much more accustomed to restrictions, although they suppose they have much greater liberty than we have?—Poisons come under the same sort of description.

98. Now, with reference to the dispensing of drugs in France, are you aware whether every person who dispenses medicine, not poisons, must undergo an examination?—Or must be a certified man. I wrote a prescription in a French town, and I found it had to go to a particular shop to be made up. In France they generally allow the sale of ordinary drugs which are of an innocent nature at shops of épiciers, grocers, and persons of that kind. If you want a prescription made up, no person can do that unless he has undergone an examination as a pharmacien.

99. Are those examinations conducted by the State, or by private bodies?—I am not quite aware of that; to answer your question strictly, I believe there is a college of pharmacy, but there is a power of examining in the country departments as well as in Paris.

100. There are bodies in the country?—At Lyons and Montpellier. In France, they have what are called faculties in some of the principal cities. These faculties are empowered to examine and to license for country practice in the district in which they are; but in the higher grade of pharmacien it is necessary for the persons to undergo a more strict examination, and they must be examined in Paris.

101. In this country, you have said, there are districts where the population are thinly scattered, as in Wales; with regard to the sale of laudanum, it might be desirable, perhaps, that greater facilities should be given in those districts for getting laudanum; does not the same apply to the dispensing of medicines?—Certainly.

102. Do you think it would be possible to establish in this country, looking at the state of the population in Wales and Scotland, a system by which, whoever in any village or small country town ought to be allowed to dispense medicines, should go through an examination?—I would say, in answer to that, the difficulty of having to apply to a country vendor, with the railway communication there is now, for the making up a prescription, would be a great point to the safety of the public. I think I would not allow any medical prescription, and I would take it as the basis of all the evidence I give you; no medical prescription should be made up except by an examined person. I would not take medicine, and I would not recommend a friend to take medicine, compounded in village shops. I do not say it is always wrong, but persons run a great risk.

103. It might not be internal but external?—There is equal danger; oil of vitriol might be used instead of something else.

104. There is such a thing as a choice of evils, and you might find yourself in that position; you had no means of getting this, and you wanted it immediately, and the person had to take the chance of whether he would go to a person who was thoroughly competent, and do without the laudanum, or he would choose the other evil, and go to the person not competent?—That is a matter of opinion; I was going to try and put myself in the position. Suppose I am in a small village or town, and I saw there was some medicine required to be made up, and it was a question of whether one would wait to get it from a country town, where there was a regular druggist, or have it made up by a man known to have undergone no examination, I should prefer waiting for an opportunity till I could put it fairly into the hands of a man who knew what he was about. The unexamined person may go right, or he may go wrong from not being acquainted with the art of compounding drugs.

105. Would you deprive a man of the power of exercising that judgment for himself, whether he would or would not do so?—Yes, I would.

106. Would you look more to the safety of the public, and rather lay down strict rules, from which there is to be no departure?—I would.

107. Do you think that would go down in this country?—I think, after a time, that this strictness would wear off.

108. After what time?—It would be very much felt at first, no doubt. Anybody may go and buy anything anywhere, and of course feel a great restriction from any legislation that might be attempted. There was much the same difference more than 100 years ago, in the reign of George II., when the surgeons were separated from the barber-surgeons. That was a complete severance of a sort of body or combined body that existed from the time of Henry VIII., and it was considered the barbers were seriously damaged in being parted from the surgeons. Ever since that time the surgeons have gone on as a separate body, and the barbers have been kept separately. It was a question about bleeding and cupping. For a long time the barbers kept up the old plan of bleeding and cupping, and the public felt it was a sort of injustice to take the practice out of their hands. I think it has died off entirely. I do not think anybody now goes to a barber to be bled. It was thought at that time it was an improper interference, that people should not be bled by whom they liked; but the change was borne, and so it would be in this case. At first it would be thought very hard.

109. May a man be bled by a barber now if he likes?—Yes, he may; and he may take the consequence of being bled in an artery instead of a vein.

110. Mr. Black suggested, if you had this examination in country places, you would find great difficulty in getting persons to take up the sale of drugs?—I cannot agree in that view. I think the trade of chemist and druggist is very widely diffused, and I believe it to be a very profitable one; and, if anything, I think there are too many in it.

111. Supposing it was desirable, as in France, to prohibit certain medicines which are poisons from being sold without certain restrictions, do you not think this would meet what is wanted to a certain extent; that the people should by what is written over their shops be able to distinguish whether a man has been a well-educated man or not?—Yes.

112. And if they go into one shop where there is a sign, if that man has gone through a certain standard examination, and they go into another shop where there is no such outward sign that he has had an education, they would go at their peril?—Yes.

113. Would not that be a middle course between the two cases, which is, that no man should dispense medicine without a thorough examination, and the present system?—That would be on the principle

principle of *caveat emptor*. If you will allow me to suggest, we should take rather a wider view than that. People cannot judge about medicine, or what may be put into a bottle, as they can in purchasing any other things. I think that rule would hardly apply if we were to consider the safety of the public. With regard to the danger a man would go through, we should not prefer the chances of death for a person ignorant of the properties of drugs. No person should be licensed to make up a medical prescription except a person educated to the business. You say very truly they might at their own risk do so, and if it were like a surgical operation I should say yes to your question. Take this case: no man would go to an ignorant and an uneducated person for the purpose of having a leg taken off, but he might go into a shop, thinking there was no great difference, as there were the same kind of toothbrushes and soap and other things for sale, and he might consider one shop was as good and as safe as the other. But, in place of medicine, he might have handed to him a substance that would kill him outright.

114. Is it not so with regard to the medical profession; under the Medical Reform Act no man can put up certain titles; if he does he would be rendered liable to a prosecution?—Certainly.

115. But a man is not restricted from acting; this is a case in point; the public can go to that man, and they can go to the other side of the street, and go to a man who has not been examined?—Allow me to make this observation. A person requiring a serious operation performed would, of course, have sense enough to know it would never do to trust himself into the hands of a person not examined. That is not the position of a person going to have medicine made up. I would suggest to you that the legislature should really interpose to protect him against his own confidence and ignorance in a matter in which he would not be a good judge. He might be, with regard to surgical operations, but he would not be as regards prescriptions. He would not know whether the shopkeeper put in prussic acid or distilled water, but he would know whether a man was capable of using properly the amputating knife.

116. Do you think there is any difficulty in doing that by which those who run may read?—Certainly not.

117. Supposing registrations were had, and it was known that he employed certain indications, and those were wanting?—I think if you were to apply that knowledge to persons, you might do some good; but you would not do the amount of good you would by confining the sale only to authorised men.

118. Admitting what exists in France, and what you have pointed out as the best way, you have stated there would be a great difficulty in this country, where everything is free, to submit to these restrictions?—Yes.

119. Would not such a middle course as I have suggested be a step in the right direction, which might be adopted, and lead to what might be a perfect system?—I think it might. If you fix the date after which all persons keeping drugs and poisons should be bound to produce evidence of their fitness by examination, I see no harm in dealing with that retrospectively. I seriously advise the Committee not to allow men to hold themselves out to be what they are not.

120. The system I have suggested might be combined with regulations that all drugs should be kept in bottles in a certain shape or colour, and labelled, and then kept in a different part of the shop?—Yes.

121. That would tend to help the matter?—I think that is now adopted by first-class chemists and druggists; they separate the poisons, and, if they have them in the same shop, they have them in a compartment by themselves.

122. You say that is adopted by first-class chemists and druggists; there is no law obliging all dispensers of medicine to keep their drugs in that way?—No. I was in a country town at Leamington; I went to a shop of a chemist and druggist there, and asked him about it, and examined his shop generally, and I was pleased to find he had every arrangement to prevent accidents, one part of the shop being cut off (not a closet, but a case with glass doors), and all the poisonous articles that might be mistaken for medicine were placed there.

123. And such precautions you would think are desirable to have adopted generally, and their adoption should be enforced by legal enactment?—After that trial that took place at Liverpool last summer, the case of Clay *v.* Abraham, there the druggist had to pay 1,500*l.* for keeping strychnia on the same shelf with James's powders.

124. Was that through an accident?—The accident arose from the fact of the bottles being close together and being similar.

125. That was a case of damages?—Yes; I think that was the amount.

126. I have been asked to put this question to you, whether the dispensation of medical prescriptions is not a small proportion of the drugs sold throughout the country?—I should think it was. I should think more drugs were sold separately; patent medicines, family medicines, and matters of that sort; probably the sale of those are much more numerous than the dispensing of medical prescriptions, especially for small things, such as magnesia, and so on. I believe the sale of these articles by retail forms a larger amount of business in small towns than the dispensing of prescriptions; but in large market towns I believe it is very much the custom, from inquiries I have made, and from what I have heard from people, to come to the shop on market days and get their prescriptions made up, and thus take a store of them. As to the exact proportions, I am not quite able to say, but I think the pennyworths and twopennyworths of medicine sold are much greater in proportion than the actual medicines prescribed by a medical man.

127. How would you propose to deal with patent medicines; I suppose you would have them scheduled according to their innocence; I am told the proper word is proprietary medicines, and not patent medicines?—I thought you said "cattle."

128. I presume, as regards cattle, you would treat cattle as you would bipeds?—Cattle drugs are sold; there are a great number of medicines for cattle, but most of them I have down here are not substances which are used for the purposes of cattle. With regard to proprietary medicines, of course the sale of these must take place under a license, which is granted by the proprietor; I do not see how any legislative Act (unless the laws regarding patents are abolished) can interfere with these medicines.

129. I suppose you probably take a view of homœopathic medicines that it is not hardly necessary to separate that class?—I think it would

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be better to do away with them altogether; there are chlorodyne and one or two others which are useful medicines.

130. They are supposed to be harmless?—Some of them are fatal to children; Godfrey's cordial, for instance.

131. And now as to the homœopathic medicines?—I do not know that they are fatal in any way.

132. You said they had better be done away with; I ask this because they are pure?—By examination and analysis of them I could find nothing injurious.

133. Aconite is used?—They say aconite is in the globules, but I have never found any trace of it; I have been told our chemistry is not refined enough to trace it; we go to the hundred-thousandth, they put in the millionth.

134. Aconite, you say, ought to be included?—I have examined the globules, and there is nothing like aconite about them; the globules turned out to be sugar and starch.

135. Is their system confined to globules; do they never use aconite in a stronger form?—They use tincture; but globules are their chief remedy, and they never consist of anything but sugar and starch.

136. The tincture?—I am not aware of the strength of their tincture; they prepare the sugar globules, and they hold them over the vapour of the tincture for a short time, and assume that the tincture goes through them.

137. I only want to know whether they do not use tincture of aconite?—I believe they do.

138. And have a store of such quantities in their shops that would require regulation, and those you propose to restrict?—I cannot place them under restriction; where they keep their globules I do not think it would be worth while to interfere. I have made an analysis in one instance, where they gave a strong dose of morphia. Six powders were made up, three contained sugar of milk, and three contained morphia and calomel; in examining the homœopathic powders, I found in some of them upwards of a grain of morphia. They do not always, as they profess, use homœopathic doses. The powders were numbered to be taken on certain nights, and in every other powder there was sugar of milk, and in every other powder morphia and calomel.

139. In the doses of homœopathists I believe there are strong tinctures, and I believe they would require regulation just as much as the dispensing chemist?—They would.

140. You have said, with regard to the present law for the protection of the public, that the Arsenic Act is a dead letter?—To a great extent it is; I have had to examine bodies after death, and I have found white arsenic without colouring matter.

141. Can the colouring matter be extracted from the arsenic?—Not readily; it would remain.

142. After the colour has been mixed is there a way of extracting it?—A great deal might be removed by washing, and if attention is not directed to it in examining a dead body it may be passed over.

143. Are you aware of the law of Scotland with reference to this matter?—I am not.

144. Are you aware whether it requires a doctor's order to procure medicines?—I am not.

145. Or whether there is any registration of the name of the person?—I am not aware.

146. That you think would be desirable with regard to the purchase that the name of the purchaser should be taken down?—I think so.

147. Mr. *Ayrton.*] Are you aware whether chlorodyne is entirely prohibited in France?—I am not aware it is. It is rather a dangerous preparation, and might be more so in the hands of a person not knowing its composition; I have found prussic acid in it.

148. I was only asking you the fact, whether you are aware of the fact that it is prohibited in France?—No.

149. You would not contemplate the use of chlorodyne?—I would not; I should say it ought to be by a medical prescription.

150. Would you prohibit it, except under the prescription of a medical practitioner?—It is not a thing to be sold to the public.

151. Although, I believe, it is a patent medicine?—Yes.

152. You would prohibit the sale of it?—I would, except as prescribed by a medical man.

153. Would not that open up the entire question as to the prohibition of either patent or proprietary medicines?—As long as the law allows medicines to be patented I do not see any way of altering the right of sale. I do not see that any restriction can be placed on the sale of them. It is only a question of policy or practice whether these things should be allowed.

154. What you would recommend is only a palliative, and there would be, besides that, others as dangerous as those you would prohibit?—Under the patent law. I must make an observation on that, if you will allow me; with regard to these patent medicines, some are bad, some dangerous; there are some very much so; Daffy's elixir and Dalby's carminative. They are very extensively sold. If the patent law permits it, they must be sold, and I do not see how you can possibly exclude them.

155. This would only be a palliative, according to your system; I understand you to say these patent medicines are sold to a very great extent, and these patent medicines are dangerous to the lives of the people?—I cannot say; many of them are.

156. Some of them?—I only know two of them, Dalby's carminative and Daffy's elixir.

157. I have been told by country chemists, and I should like to know your opinion, that the sale of patent medicines is far greater than the sale of ordinary medicines under prescriptions; do you think that is correct?—I have no experience by which I can answer that question. I should have thought medical prescriptions were far more numerous; but I am unable to give you any answer, because I have never made any inquiry into the fact. Patent medicines are largely sold. I do not remember, with the exception of the poisoning by opium of the children that I have mentioned, I have not had a case of poisoning by patent medicines.

158. Are you aware, in France, the sale of laudanum is prohibited entirely, except under the prescription of a medical man?—I believe that is so.

159. In a case where a person is suddenly seized with cholera, and could not get it except through the prescription of a medical man, he might lose his life if a medical man did not come in time?—I can hardly contemplate such an emergency.

160. It nearly happened to me?—I have great doubts whether laudanum is a remedy for cholera. There

There would be an inconvenience with regard to the facilities for purchasing these things.

161. You say you prohibit the use of chloroform?—Yes.

162. I should like to ask your opinion on a case of this sort: a man might have a severe accident, a medical man could not be found, the man could not be moved, and chloroform was administered to him by a man, not a practitioner, who gave him chloroform, and under the influence of chloroform he was removed home; the medical man said he should do the same; do you say it was unwise?—I would not say unwise, but dangerous; the chances are a man administering chloroform without knowing what are the doses, I should say, would greatly endanger life; and as far as surgical treatment is concerned, the man had better wait with the pain of the fracture of the accident until a regular medical man came who knew how to use the chloroform properly. Take 20 cases, and 19 would probably die.

163. And supposing the medical man having arrived, and thinking it necessary to administer chloroform, no chloroform can be got for a distance of 10 miles, and the man sinking rapidly?—It is a sort of hypothetical case I have a difficulty in answering. I think the facilities of obtaining chloroform in country towns are great; but the effect of chloroform is not so great as laudanum.

164. I pass from that, and ask you this question: do you not think the effect of the stringent examination on chemists and druggists would be very much to diminish the number?—Yes, I do; and I think it should not be made a stringent examination, certainly not at first. The Apothecaries' Society obtained their Act in 1815. They began with a certain standard of education; they agreed to advance it gradually, and it would not do in a matter like this to compel men to undergo a stringent examination in order to do what they are now permitted to do without legislation at all.

165. Would it not have the effect of making a monopoly?—It would.

166. And induce chemists and druggists to increase the price of their drugs?—There would be a competition on that point, and it would have the effect of keeping a number out of the trade.

167. Dr. *Brady.*] Have you made up your mind as to the fact that there is a necessity for legislation?—Yes, I have; I have considered the matter for some years, and especially with reference to a Poisons Bill brought in some years ago, and also with reference to this Report of poisoning which I drew up for the Board of Health.

168. Do you think all persons who dispense medicines should have a fair education?—Yes, I think so, and have a fair examination. I would not take it out of the department necessary for the knowledge of drugs or prescriptions.

169. Do you think by a better education, and giving a better standing to chemists and druggists, they would improve the medical profession proper?—I certainly think it would have this good effect. It would give many benefits to the medical profession as to the safety of prescriptions being made up. It is a part of the profession, and the change would be a general improvement. I may state my opinion, that I think the state in which the profession of pharmacy and the profession of drugs has been allowed to continue in England is a disgrace to us.

170. Do you not think from the want of knowledge of traders in drugs (not knowing the qualities of them), the public are thereby injured; they are imposed on from time to time?—They are, and especially with regard to laudanum. It is a practice with these low dealers to adulterate very largely. I have had samples of laudanum brought to me; they have been largely adulterated, and a great fraud is thus perpetrated on the poor. Tincture of opium, mixed with other tinctures, which are of a dark colour, but would not have half the strength that a regular tincture prescribed by the pharmacopia ought to have.

171. Is it not the practice to have adulterated tincture of opium, and the people do not get value for their money?—I do not think it happens to regular chemists and druggists; there they keep to the rules of the pharmacopia. In the trade, I think it is adulterated, and the public do not get what they profess to sell them. They get laudanum, which is not one-third the strength that it ought to have.

172. You stated it was a balance between selling opium and not selling opium; do you not think it has a very injurious effect?—It is sold and used largely for quieting children, and to prevent them making a noise.

173. You are of opinion there should be some restriction put on the free sale of opium?—That is my opinion.

174. You are aware that oxalic acid is used in cleaning bonnets as well as boot-tops?—Yes.

175. Are you aware of any serious cases of poisoning occurring, from the use of oxalic acid, to the young girls that use them?—I have only heard of two or three suicides in that way by girls who had access to it and salt of sorrel.

176. Supposing you mix this arsenic, which at present is allowed to be sold so freely; if that arsenic was put into a body, the blue tint would not be absorbed by the body?—It might be given in coloured liquid without the colour being noticed; it could not be given with white articles.

177. Contemplating legislation on this question, are you of opinion that all drugs necessary for the public should be sold in the shops of persons who supply those drugs, as, for instance, soda magnesia, gentian, and so on, might be sold with perfect freedom?—I think so; and there is another thing which I do not know if I have impressed on the Committee; there are poisons which no person can venture to give without detection. The sale need not be so restricted with regard to substances which will announce their presence when administered, compared with substances which may be given in small quantities, and against which no person can guard himself, and in which there is usually death in the first symptoms.

178. The present sale of proprietary medicines is not restricted save by license?—I believe not.

179. Do you recollect a very serious case that occurred in the City a few years ago of a lady destroying her children by vermin powder?—Mrs. Vyse, on Ludgate-hill. It was not a proprietary medicine; that was a vermin powder; but I should advise the Committee to strongly prohibit these powders, except under very great and stringent precautions, from being sold under any circumstances.

180. Now, do you think it would be wise that in all patent medicines for sale, the actual ingredients should be placed on a label when they are sold, in order that the public should know what they

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they are?—I think it would be an excellent provision, and I think it would take away a great objection to the use of patent medicines. Physicians have adopted some of them; James's powder is an instance; and there have been good medicines which have been thus brought to the knowledge and use of the public. If a person is protected in his rights, there should be no objection to announce what the composition of it is; and a great deal of difficulty about the sale would then be removed.

181. In any Bill brought into the House you would suggest the propriety of such a clause being introduced?—I would, and I would go further than that; if there were any attempt at deceit by misstating the nature or character of the ingredients, the patent should be void; that would be a great precaution against deceit.

182. Is it within your knowledge, that in prescriptions articles are substituted one for another among certain classes of chemists and druggists?—You mean they do not follow the prescription strictly?

183. Yes?—I do not know that it is done to any considerable extent, but if one infusion is not ready they take another; but I am not aware that accidents have occurred.

184. The public are injured?—I do not think it is done by educated chemists and druggists; everything is in proportion to cheapness and the facilities with which it is obtained.

185. Suppose paregoric, Daffy's elixir, that they were to put the ingredients on the label, do not you think it would be a caution to the public and those who bought them?—I think it would be a great protection if the Committee insisted on this, that to a person who buys them the ingredients ought to be plainly stated.

186. It would be a great safeguard?—Yes.

187. Mr. *Ayrton.*] Will you be good enough to explain precisely what object you have in view in restricting the sale of drugs?—To save life, and prevent their use for murder or crime.

188. For saving life in what way?—To take care the poison does not get into the hands of people not aware of its nature.

189. Do you think that would be of any importance as regards the act of sale?—Of course it would give a little more trouble.

190. You have said your object is to prevent the use of the drug after it has been sold?—The improper use.

191. You do not want, in restricting the sale of drugs, to do anything connected with the sale itself?—Except to trace the vendor and purchaser.

192. Do you think with reference to the act of sale that any evil arises in the act of sale?—It would be necessary, if I understand your question rightly; the restriction, I think, should be this: there should be the proper labelling of the substance sold, the date, the name of the vendor, and the name of the purchaser.

193. Is there any necessity, in your opinion, to restrict the sale of the drug, to prevent its being erroneously sold, improperly measured, or improperly weighed?—I think this, if it is a question of proportion or weight, it should be in the hands of a person trained.

194. The sale of drugs has only to do with the fact of weighing or measuring it, on the one hand, and getting the money on the other; I want to know if you think any restriction is necessary for the purpose of ensuring accuracy of weight or measure?—I think we should leave it entirely with the person, who is an educated man, and who has been examined.

195. Do you know whether there have been many accidents or not connected with the measurement or weighing of drugs?—I have heard of cases where unquestionably a regular man has been put on.

196. I am speaking of the sale of drugs?—I cannot say I have.

197. We may take it, as far as your experience goes; there has been no accident worth noticing in the measuring, weighing, and selling of drugs?—On a large scale?

198. On a small scale, apart from making up prescriptions?—I do not at present remember any that have occurred to me.

199. With regard to making up prescriptions, do you know accidents have occurred in making up prescriptions?—Yes, chiefly from information I have had. I have made inquiries, and sometimes a wrong bottle has been taken, or too much medicine has been put into the bottle, or one substance has been mistaken for another.

200. How often do you think it has occurred; how many times in the year have you heard of it?—I should have a difficulty in telling you; they have not been fatal cases, but a person has come to the laboratory with a bottle or powder; he has said, "There has been a mistake here," and asked for my opinion, and gone away. I have not kept a record of such cases.

201. Does that come frequently under your notice, or only once a year?—Two or three times a year.

202. You having rather a general knowledge of what is going on in these matters?—People come to me.

203. Do these things occur yearly with persons who are regular chemists making up drugs; or have they occurred with persons who have kept a shop which is commonly called a chandler's shop; in the smaller shops, not with the regular chemists, I mean in shops that are exclusively devoted to the making up of prescriptions, or in shops where they sell tea and coffee?—With regard to the retail shops or grocers, as far as my recollection goes, they have sometimes sold a poison instead of an innocent substance. With respect to the making up of prescriptions, I have not seen any fatal cases or accidents among regular chemists and druggists.

204. Have you known many in other shops?—That I cannot say I have inquired into; I have not gone into the matter; in a case submitted to me I have rather looked to see whether there was poison or not, and given an opinion, and sent the person away. I should have a difficulty in giving you an idea of the proportion of accidents among regular and irregular druggists.

205. Have you known accidents in the chandlers' shops?—I have not met with accidents, but have heard of them as a result of the free power of selling drugs.

206. I am not speaking of the subsequent use of the poisons; I am speaking of selling poisons like arsenic instead of sugar?—I had in my mind a case in which arsenic was sold for arrowroot; a very serious case it was too; it led to two trials for murder; about 12 or 13 persons were injured in one family. It occurred in Lincolnshire: a farmer sent to a shop in the village where they kept drugs, boots, and shoes, and various things together; he wanted a pound of arrowroot; the arrowroot

arrowroot was served to him, and 11 or 12 persons were made seriously ill; I am not sure whether any died or not. The arrowroot I subsequently examined, and I found, in a pound and a-half, 180 grains of arsenic, enough to kill 90 people. On making further inquiry, I found there was a drawer connected with the counter in the shop in which there was arrowroot in one part and arsenic in another, and a mixture of articles. Both being white, arsenic was mistaken for arrowroot, and they got mixed together.

207. That was not a matter depending on scientific knowledge, but an accidental mixing?—But I think with a person who knew what arsenic was, such a thing could not have occurred.

208. Do you know many cases of that sort, where there has been a mixing of substances, from the things being sold in the same shop?—I am hardly prepared to give you details of cases. Another instance occurred in Sussex, where, in a shop, I found the oatmeal, the rice, the tapioca, the arrowroot, and nearly every other article mixed with arsenic. The man kept the arsenic in a drawer with these substances, and sold them thus poisoned.

209. Mr. *Roebuck.*] That is an inference of your own?—I presume that to have been the case from further inquiries made. It would seem they used the drawer. The drawer was sent to me and I examined it, and there was not a single partition in which I did not find arsenic. I mention this to show the careless way in which things are kept in these village shops. An accident occurred to Dr. Alexander, who sent to one of these village shops for arrowroot; the white substance sold was not quite to the weight, and so they resorted to the arsenic. Arsenic was sent to him with the arrowroot: he died from the effects, and his daughter nearly lost her life.

210. Mr. *Ayrton.*] Do you know any other case?—An accident happened to a friend of mine; but, if I went over the documents, I could produce a great number.

211. I want rather your explanation to the Committee how far, from your information, substances get confounded or mistaken in the shops where these dangerous articles are sold in common with other articles?—I think, judging from what has come before me, that the mistake of selling laudanum for tincture of rhubarb is common. I have met with several instances in which laudanum has been sold in place of tincture of rhubarb; fortunately, they have not terminated fatally.

212. These are all cases that have occurred in shops, or miscellaneous shops?—Yes; village shops.

213. Tincture of senna is a very innocent thing in itself?—Very.

214. You do not propose to prohibit the selling of tincture of senna?—No.

215. Or rhubarb?—No; the only proposition I have made is, they should not be allowed to sell substances that are dangerous to life.

216. Is what you have proposed framed on that principle?—Possibly it may be open to objection. I wrote it down hastily last night, thinking the Committee might want information. It admits of modification.

217. Are not some of the most dangerous substances used in the common affairs of life, besides for medical purposes?—Yes.

218. Oxalic acid?—That is not used in medicine.

219. You propose to prohibit this being sold?—Except under restrictions, and by educated persons.

220. That is, I suppose, used in every household?—No; it is used, but not in every household; they use it to clean straw and silk.

221. Grates?—I never heard of oxalic acid being used for grates.

222. Oil of vitriol?—Diluted.

223. In a poisonous condition?—Yes, if a person swallowed it. I beg you to remember at least this (this list refers to poisons which can be administered in secrecy): with regard to diluted vitriol, which is sometimes used for household purposes, it is not entered in the list, as there would be great difficulty in giving that to any person in secrecy, unless he was drugged. The person would have notice of it readily by the act of administration.

224. You are going to the use of the thing, after it has been purchased; I was giving my attention to the sale of the thing itself; whether accidents might not occur in the sale of these commodities to be used for the purposes of common life, and not for the purpose of medicine; if they are to be kept in the shop, as other things, the same accidents might not occur?—It might be so. I have known oil of vitriol swallowed for beer, out of a wine bottle, but I should not advise oil of vitriol to be put on this list; I do not see any necessity for it myself.

225. All of these things are to be kept promiscuously in a shop?—I say they ought not to be kept promiscuously.

226. I understand you that a person who sells a number of commodities like tea and coffee, and articles of that kind, ought not to be allowed to sell poisonous substances, all kept together?—A village shopkeeper should not be allowed to keep them; but, if he did, he should keep them apart from articles of food. I do not see that there is any necessity for his selling them, in reference to public convenience, compared with the great danger of life, and the known destruction of life by the sale of them. I do not see there is any necessity for any but educated persons selling these articles.

227. Is not arsenic a thing used for many commercial purposes?—Yes; but I would not allow it to be sold, except under restrictions. Almost all medicines we have are poisons; it is a question of doses, and we cannot make a distinction between them.

228. How do you propose to prevent the accidents you mention occurring by the Bill before Parliament?—I think, in the sale on a large scale, of large quantities of these articles, especially a poisonous article, there should be some label or instructions on the article as sold, that people may be warned. It is a disgrace to our system that such articles should be allowed to circulate without anything on them to warn the public of the excessive danger. I do not see that we could do anything to prevent the sale, but we might see that the poison is strictly labelled in passing from hand to hand.

229. Looking at the French schedule, are you aware what the object of that is; is it to prevent subtle and insidious poisons being sold, to prevent the abuse of them, or to prevent errors?—I think both; but I think the two poisons mentioned are prohibited.

230. Would it be an accurate description to say they do embrace the most insidious poisons for the destruction of life?—Yes.

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231. And they exclude the grosser poisons that are in common use for domestic purposes?—There is one included, oxalic acid.

232. Arsenic?—No; arsenic is included, and also oxalic acid; but in France oxalic acid is not much used as a poison. In Denmark it has been used, and the strong acids have been there much used. There is a kind of habit in countries in the selection of poisons for the destruction of life. In this country we manufacture a large quantity of arsenic, so that the poisons are easily obtained.

233. Are preparations of lead in the list?—Of the French?

234. Yes?—No, I think not. There were many more, but the present Emperor struck out the articles.

235. Are not some of them poisons?—Not active poisons at all; in 30 years I think I can mention only one instance of death from being poisoned by sugar of lead. A person taking lead would throw it off his stomach and recover. There is no necessity for entering that.

236. What would you suggest as to the expense of any mode of carrying out the system of examination?—I think all that would be necessary would be this: that the person should present himself for examination on the subject of botany, in so far as it relates to medicine and *materia medica;* that would be one point. Then the combination and properties of drugs with pharmaceutical chemistry, and the doses of the different medicines; also the power of reading Latin prescriptions with facility, and a general knowledge of the common poisons.

237. When you spoke in your previous answers of an educated person, you meant a person who complies with what you have stated?—Yes; undergone an examination.

238. How would you propose to get up the people in villages?—As to chemists and druggists?

239. Yes?—I think the answer may be put on this basis, to be safe to the public. I would advise that the examination should not be so strict as that required for the medical profession. I would suggest that it should not be left entirely to any one body, but that a Board should be constituted, in which there should be two members of the medical profession. I am only putting this as a suggestion to the Committee. Two members of the College of Physicians should be associated with the examiners, and they should examine candidates on their knowledge of prescriptions written on the spot, and at the same time test their general knowledge of the doses of medicines. Writing prescriptions and prescribing doses are matters belonging to the medical profession, and I think they would be a very great safeguard in another way, it would prevent the examination from being so severe, on the one hand, as to restrain the trade, and at the same time so loose as to allow improper persons to enter.

240. I did not understand how you distinguish between stamped medicines that might be sold and that might not be sold by educated persons?—The only thing I would suggest is, there should be a plain label on the outside of the medicine bottle, either with the entire composition or the proportions of any noxious or poisonous substances in it.

241. And, with that restriction, you would allow any person to sell, educated or not?—It would not depend on their knowledge or care; they would sell the thing as they received it. Although proprietary medicines have done a great deal of harm, I could hardly tell you whether they have killed or saved to a greater extent; they are now permitted by law, and the proprietors are under no liability to state their general composition.

242. Mr. *Roebuck.*] I think you say you have directed your attention to medical jurisprudence?—I have.

243. In that, I suppose, has been included what law can do for the protection of the public in matters connected with medicine?—That is so; that has been my object, to make myself acquainted with those points of law.

244. The matter in hand now is to protect the public in the buying and selling of drugs (chemicals), so that they may save, as much as possible, human life?—And prevent crime.

245. Now, the way in which life is endangered is, first, by design, and, second, by accident; by design, I suppose, you mean murder?—Yes; the attempt to murder by poison.

246. The first question I would ask you is, do you suppose law can prevent any man who is determined to murder by chemicals having access to them?—No, I do not believe it could; I do not suppose you could suppress poisoning by legislation. But, I believe, you would reduce the number of cases, and render detection more easy.

247. The whole of the chemicals may be divided into poisonous and harmless?—Poisonous and non-poisonous.

248. The poisonous, you say, ought to be sold by educated persons only?—That is, a selected number of them.

249. By educated persons?—Yes.

250. The non-poisonous you would allow to be sold by persons not educated?—Yes; I think that, for the present at least, that might be allowed.

251. Supposing that the village shop contained boots and shoes, and senna and castor-oil, and that a mother of a family wanted a dose of castor-oil for her child, and she tells her little child to go down to the shop to get the castor-oil, you would allow that to be sold?—Yes.

252. Supposing the physician came in, and he said your child wants castor oil; to prevent the possibility of a mistake I will write it down in English, and send it to the shop, would you allow them to sell it?—To sell it under a written English order?

253. Yes?—Yes.

254. Is not that a medical prescription?—Technically it would be.

255. Are not all prescriptions written in France, in French?—Yes.

256. Those are medical prescriptions in the vernacular?—This is a prescription in English.

257. Would you prohibit their selling the castor oil under the physician's prescription for the child?—On that prescription I would not. I would rather treat it as an order. It is a question of technical definition.

258. The law regards that?—As to what a medical prescription is. A "prescription" I should look on as it is ordinarily understood.

259. The unintelligible formula?—Which no one in the shop could make out.

260. Supposing men got more rational and wrote in English?—That difficulty you mention would arise. You might permit such persons, so long as they had the substances mentioned, to sell that which was written in English as an order or prescription.

261. I have

261. I have broken down your distinction?—The definition of what a "medical prescription" is.

262. Therefore, the person would be allowed to sell all non-poisonous drugs, whether from a physician's prescription or not, supposing that prescription were in English?—Yes.

263. Will you tell me what you mean by a drug?—When we come to definitions, there is a very great difficulty. I should define a drug to be an animal, vegetable, or mineral substance, which can be safely and properly used for the treatment of disease.

264. That will include all poisonous substances?—I have already said there is no difference between poisons and medicines. I can put that fact before you. Here are two packets of the same substance (arsenic); one is a poison, the other is a medicine. (*The Witness produced two small packets in paper.*) That is a medicinal dose of arsenic (one-twentieth of a grain). Here I have the same substance in another form. That is the poison (a packet containing two grains of arsenic), and this is the medicine (*pointing to the two packets*). All I can say is, a medicine, in a large dose, may act as a poison, while a poison, in a small dose, may act as a medicine.

265. What I gather from you is, "drug" is applicable to both?—It includes all things, animal, vegetable, and mineral.

266. Can you tell me the difference between "chemist" and "druggist?"—Yes; I think there is a very great difference; and I have always objected to the name of chemist and druggist. The "chemist" is one who confines himself to the practice and science of chemistry; "druggist" applies to those who deal in the dispensing and sale of drugs. A further distinction has been made by some persons being called analytical chemists.

267. You would confine the word "chemist" to the person learned in chemistry?—I should.

268. And the "druggist?"—To those dealing in drugs.

269. Therefore, we might leave out the word "chemist" altogether?—I think so.

270. The country is divided very much into town and country; and the country is situated a long distance from the towns?—Yes.

271. I dare say you are conversant with English villages?—Yes; I generally go to the assizes, and visit different places.

272. A village is very often 10 miles from a town?—Yes.

273. In that village there is a shop, which in America would be called a store, containing all sorts of things; amongst other things, noxious and innocuous drugs?—Certainly.

274. Supposing you brought in a Bill to prevent the sale of noxious poisons, and allowed the innocuous ones to be sold, would you require any examination of the person who is to sell those drugs?—The innocuous? I would not operate retrospectively. It is a question for the Committee as to the future. I think those who have been in the habit of selling innocuous drugs need not be interfered with.

275. The future?—It is a question of public convenience, and I think, perhaps, as long as there is no danger to life or facility for crime, I see no harm in allowing such persons to sell these drugs.

276. Do you consider there is no necessity for examination for persons selling drugs?—Not for the sale of these drugs. They may, it is true, make a mistake, and give one medicine for the other.

277. You have already stated, "prohibit the selling of dangerous drugs;" does that avoid the necessity of examination for all those persons who sell innocuous drugs in the country?—As they are at present.

278. Supposing a law was passed to prohibit them from selling poisons, do you see any necessity for an examination of persons to sell innocuous drugs?—No; and, I think, if rigorously enforced, it would suppress the sale at once.

279. Then, as far as regards the mere making up of prescriptions, supposing those prescriptions were written in English, you do not want any examination?—In reference to innocuous substances. I think we are not quite understanding each other as to "medical prescriptions;" you have given me a supposed case, but that is not an ordinary "prescription." "Prescription" involves several articles.

280. Suppose a doctor came in and saw a little child had overeaten itself, and he said he thought a good dose of jalap would do the child good, and mix it with rhubarb, to make it less agreeable, and writes it down, would you call it a prescription?—Yes, and it shows the difficulty of making a strict definition; I think, a person should be allowed to sell such a mixture.

281. Now you have come to this conclusion, that persons who require examination are those who deal with what I may call dangerous drugs?—Yes.

282. And beyond that you do not go?—Dangerous to health or life, I do not see any necessity for going beyond that. There is a provision which might be made. Unexamined persons might be allowed to compound medicines, such as rhubarb, &c., from orders or prescriptions in English of a plain and intelligible kind. This could do no harm; but I would confine the compounding of the regular Latin prescriptions to those who have been examined.

283. Because they are unintelligible?—Not only because they are unintelligible, but such a substance as cantharides might be on the order.

284. You said you would put down cantharides as one of the prohibited things; is not a blister cantharides?—Yes.

285. Supposing a child is to have a blister, would you prohibit the village shops from selling a blister?—I would prohibit the selling of cantharides with powder.

286. But of the shape of a blister?—No, I do not think any person would swallow a blister.

287. You can do a great deal of harm with a blister?—There would be cantharides in it. Cantharides have been most improperly used by females for the purposes of abortion: and the facility of selling this substance is a dangerous thing.

288. I suppose you know, in the villages there is a plant known by the name of kill-bastard?—Yes; it is used for the purposes of abortion.

289. Is that the feverfew?—I have heard of that.

290. I know the name?—There are many kill-bastard drugs.

291. Those are things that anybody can get without going to a chemist?—Certainly; and it comes round to the point you said, that no legislation can stop the sale of all poisons.

292. Do you recollect the case of a person being

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being poisoned by eating something in the place of horse-radish?—Yes, aconite; monkshood. You are alluding to a case that occurred in Scotland, where it was served up as horseradish sauce, and three persons lost their lives by it. Any person can get the root of aconite if they know anything about it. But it is not a thing that can be easily administered by another; a man must be aware of taking it; to take it you must crush it between the teeth, and that is sufficient warning; unless it is served up with sauce, and its taste concealed, as in that particular instance.

293–94. There is a case you stated just now of a number of children, 300, poisoned by water being drawn out of a boiler; how would you prevent that by legislation?—As to the poisoning of the children, I think that would not have occurred if the vessel containing the liquid which had been sent to the school had been plainly marked poison. The man put in a certain quantity of this poison for the purpose of cleaning the boilers, and by mistake the water put in the boiler was drawn off and given to the children.

295. No label would have prevented that?—As to cleaning the steam-boiler; but this poisonous liquid was prepared for use in kitchen boilers.

296. I am now directing your attention to the labelling?—That admits of an explanation.

297. How could you by legislation prevent it?—I do not think I could.

298. Therefore the illustration you put forward has nothing to do with us?—It shows the ease with which arsenic is capable of being diffused unknowingly among the public. It was a very serious case. I submitted it to the Secretary of State. It was submitted to the law officers of the Crown, but nothing could be done. The man, or his employers, were guilty of negligence, supposing the vessel had been labelled poison, the accident might not have occurred.

299. The vessel had nothing to do with it?—Why not, sir?

300. Because the water was drawn off from the boiler and put into another vessel?—The man did not know there was arsenic in it.

301. The man knew that arsenic was used for the purpose of cleaning the boilers?—No, I beg your pardon, he did not.

302. He got it from his master?—He thought there was no poison at all about it, and no warning being given to him by his master, the man did it with perfect innocence, and culpable negligence could be traced to nobody. I quite concede what you say, that no legislation would put down death from poisons. That is not the object I have had in giving the opinions which I have given here. It is to see whether there are not many cases of death from poison which may be prevented by legislation.

303. I want to know whether it is requisite to institute an examination of all persons?—We agree, in reference to innocuous drugs, it is not required.

304. In all cases of innocuous drugs no examination is required?—Not for the safety of the public.

305. Now, about patent medicines, I think it is your opinion that all patent medicines, without exception, ought to be put down?—Yes, my opinion is, they have done more harm than good.

306. Do you recommend the Committee to legislate in that sense?—No, I do not think it can be done. It is a bad system, although there are undoubtedly some good medicines among them. There are two which I have already named which I believe cause a large amount of injury to infants. I think if they were suppressed it would be a good thing; if all patent medicines containing opium were suppressed or put under some legislative restrictions, it would be a good thing; a patent medicine may contain anything, and the public know nothing about it.

307. I think the word "patent" is wrong; they do not take a patent out, they get a certificate for it?—Proprietary medicine.

308. They are licensed to sell stamped medicines?—Yes.

309. You made another observation which struck me; you want the law to protect a man against himself; is that your opinion?—I do not know to what you are referring.

310. You would not allow a man to prescribe for himself?—I would not allow him to have any free facilities for obtaining chloroform.

311. Supposing a physician came to me and found me suffering under great pain and left me a small bottle of chloroform, and said, "You must not take it all at once; be careful about how much you use," you would not allow it?—I would allow it on the responsibility of the gentleman who gave you those directions. If anything went wrong he would be answerable for the consequences.

312. In what way?—I believe it is an unsafe proceeding, as a physician ought to know. You put the case in reference to a man of education; but if a physician went to the house of a pauper or an ignorant person, and handed him a bottle of chloroform with verbal directions to that man, I think he would incur a great responsibility in case of his death.

313. I had an Irish servant who got tipsy, and next morning he had a frightful headache, and he came to me and asked me what he should do; and I said, "You had better have an emetic," and I gave him some tartar emetic; and I said, "Mind you take that spoonful by spoonful till you are sick, but do not take it altogether." I had not turned my back before the man took it all; would you make me answerable for that?—That is a question of law; I can hardly answer that; I think I should look a little into this question. Chloroform is admitted to be a very dangerous and uncertain drug; it operates on some with great rapidity, and on some very slowly. Some are made insensible by a quantity that might have no effect upon others. You are putting it in comparison with a drug like tartar emetic; I should have no fear of the death of your servant because of the quantity he took at once. With regard to chloroform, it operates differently, and it is not taken into the system as a solid substance, or thrown off by vomiting; it is breathed; and a man, in the absence of any person to superintend, or without sufficient experience, bringing a quantity of the vapour in contact with his lungs, will die; he is in much greater peril in such a case than in giving the dose of medicine which you describe.

314. I would ask you what you would recommend to the Legislature in order to prevent a man administering to himself an improper dose of chloroform?—That cannot be done by legislation. I would suggest there should be no facilities afforded to the public generally for obtaining chloroform and similar drugs as they do now; anybody may be murdered in his bed; any man acquainted with the properties of chloroform may kill

kill a man outright as he is lying there; he would pass to death without waking; I say such an instrument as this is extremely dangerous to leave the public to deal with as they please; chloroform has been used for criminal purposes; it is too powerful to be safely used even by educated people; I have known four deaths from chloroform where persons administered it to themselves.

315. Mr. *Ayrton.*] How do you deal with the case of stamped medicines where the composition of them is a secret; would you make the persons disclose its secret?—Yes.

316. Then, how would you give him the benefit of it?—He is protected by the patent law.

317. They are not patented; I am speaking of stamped medicines that depend upon the possession of the secret, how would you deal with those?—Surely it is a dangerous thing that anybody may call what he pleases a medicine, keep it secret, get it stamped, and sell it to the public as a safe medicine.

318. Something like Warburg's fever drops?—I think he should be compelled to state what it is; it should be stamped on the bottle or box.

319. How would you give him the benefit of his discovery?—That might be by some legal measure to register it, and properly state what its contents were; and then he might be permitted to sell it to the public. That I presume would be a remedy; but to allow persons to stamp boxes of pills, without any notice to indicate what is in them, is a dangerous practice. It gives rise to a great deal of illness, and makes work for druggists and doctors; but as to stopping it altogether by legislation I do not see how it could be done.

320. Do you think it gives rise to more illness than the practice of people doctoring themselves?—It is by the patent medicines that people chiefly doctor themselves. It is by the use of patent medicines, I believe, among domestic servants that they frequently become out-patients at hospitals. They go into a shop and buy a box of pills as if they were buying peppermint drops. Some of these pills contain large doses of gamboge; and they do injury by producing irritation of the bowels.

321. Suppose they took Epsom salts instead of an aperient, when they were suffering from congestion of the liver?—There would be no harm; that is a mild purgative; it clears the bowels; and it is not an irritant, like gamboge, when it enters into the bowels.

322. Suppose people were to doctor themselves, would they be at liberty to doctor themselves in the same spirit?—Yes.

323. Would not precisely the same injuries ensue if they take the wrong thing?—Yes. I say, do not allow these injuries to be done to the public by a kind of recognised legal power of selling these secret medicines. As they are not interfered with, nobody knows what is in them, and the men who make them up do not know what the proportions of the ingredients or the dose is. It is a dangerous practice.

324. Would not there be the same result?—If they took the wrong thing.

325. Mr. *Roebuck.*] Do not poisons come from doctors?—Yes.

326. Take laurel-water; there is a celebrated case?—Donovan, in 1780.

327. You can make laurel-water in the house?—It requires a little skill, but it can be done.

With regard to these poisons, such as hemlock and nightshade, the poison is in the plant, and it is very difficult to extract it. No one would let a stranger obtain any of the alkaloids. If you attempt to use the plant by itself, it has a strong taste. It is powerful, and noxious. We owe it to the credit of a large number of chemists and druggists, and pharmaceutical chemists, that they have themselves done what the law has left free; they have put restrictions, of their own accord, on the sale of these very dangerous substances, or the extent to which life might be destroyed in London and large towns would be very great indeed. There is an eminent chemist in London who deals in these things, and he told me this. At the time of Palmer's trial public attention had been called to the subject; and a person came into the shop, and requested him to prepare ten pills with one grain of aconitina. This gentleman, who had a knowledge of the proper dose, said, "If you are a medical man, you must know that one of these pills might be a fatal dose, and I decline to make them up."

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328. In lucifer matches is there not a great quantity of poison used?—Yes, phosphorus, which is a poison.

329. Would you propose to sell that only under the restriction?—I have not entered phosphorus in the list as an active poison; it is very well known to the public, but it is not so much used in England as a poison as in Germany. There is one kind of phosphorus that is not poison which is employed in the manufacture of safety matches; I knew a woman who took a number of the tops of these matches, and they had no effect on her. I do not think we could interfere with the use of phosphorus.

330. Mr. *Ayrton.*] Do you think, according to your meaning, you could seriously assist in preventing poisoning unless you passed a law to prevent these active poisons being sold without a medical prescription?—No, I do not think I could. I believe, as I have already stated, a great deal is already done by respectable chemists to prevent danger to life; but what the public have to fear are, the ignorance and carelessness of those who are in the lower branches of the trade.

331. You go the length of enacting no person should sell an active poison in that list except from a medical prescription?—Except on a medical prescription or a medical order.

332. Yes?—I said originally I should be glad if the public, under certain precautions, would refer a medical prescription to a man who had undergone an examination.

333. How would that prevent those who purchased them from misusing them?—It would not; I have repeatedly said no legislation would prevent poisoning. It would reduce the number of deaths, and it would make it more certain, if crime is perpetrated, to discover it.

334. You would not accomplish your purpose unless you went the length of preventing these things being dispensed without medical prescription?—No, or without a medical order.

335. Sir *FitzRoy Kelly.*] You have shown there are some considerable difficulties in drawing the line in the way of prohibition in the sale of poisons, both as to persons who sell and things that are to be sold; do you see any difficulty or complication at all in subjecting to an examination chemists and druggists in relation to the making up of prescriptions in the ordinary form, Latin?—

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I see no difficulty; I think it will be like the Apothecaries' Society starting with a sort of compulsory examination, which would not preclude the selling of these things. It would be desirable, in the first instance, not to have too severe an examination, and to accustom the public and the profession gradually to it; the Apothecaries' Society succeeded in that. Their Act has been in operation since 1815; and, after a period of four or five years, they added to the subjects for examination. There is at present a great confusion between the medical profession and the druggists' profession with regard to the sale of drugs. Druggists do not require such a high standard of knowledge as a professional man must have, therefore of course it would be improper to make an examination so stringent as to create a monopoly.

336. Mr. *Roebuck.*] In a large number of cases no examination at all?—That is as to innocuous drugs; you could not prevent the sale of castor oil.

337. Mr. *Ayrton.*] The great bulk of medical prescriptions embrace the selling of innocuous drugs?—Do you mean medical as distinguished from chemical.

338. According to Dr. Abernethy, nine-tenths of the disorders spring from derangement of the stomach, which are cured by simples, and giving things like aconite is quite unnecessary?—Yes; the fact is, if a period was fixed, it might lead to the absorption of the lower trade into a better class of persons, beginning at first with the lowest class. As you are aware, there are some apothecaries, now living, who have only their license to practise by having practised before the 1st of April 1815; I have seen one of them in 20 years; but the greater number have died off, and there is now a better class of men altogether, and that, I think, will be the effect of legislation with respect to druggists. Just before the Apothecaries' Society was founded, there was similar confusion and difficulty as to who was an apothecary and who was not. The time will come round when the present low class of druggists will be absorbed into the general body; and I believe the profession and the trade itself will be benefited by the result.

339. Sir *FitzRoy Kelly.*] I understand you are distinctly of opinion that the examination should be an easy one, so as not to interfere with the trade, and I understand you to chalk out that two persons should be duly qualified to go about as examiners?—I think it would require that two examiners for examining in medical botany and the properties of drugs, or what is called *materia medica*, and two other examiners for examining in pharmaceutical chemistry; that is, chemistry required for the purpose of preparing compounds and in medicine; and then I would, for the protection of the public, suggest that two Fellows of the College of Physcians should be placed on this Board of Examiners, for examining the candidates on the doses of medicines, and whether they can read ordinary medical (Latin) prescriptions, Druggists ought to know the doses in which medicines should be given.

340. And that examination you would mean to be throughout the country, or is it to be in one particular place?—It might be by examiners travelling, or by an examination in a fixed place, as they do in France. It would be a great point to have the examination in London, as is the practice in the medical profession. We allow any number of schools anywhere, but the examinations are always in London.

341. But do you not see any difficulty with regard to the evidence you have given as to the necessity not too much to interfere with the sale of drugs: do you not see a difficulty in bringing anybody up to one point?—But in this respect my view is prospective, not retrospective. If an order were made that, after such and such a day, no person who has not undergone examination should deal in poisonous drugs or compound medical prescriptions, then the rule would be soon observed. With regard to the Apothecaries' Act, after August 1815, it was thought that many were treated with hardship. It will be thought by some to be a hardship to interfere with the druggists' trade by any legislation now. I am not asking you to force an examination on chemists and druggists over the country; I do not see the necessity for that. I think they should be allowed to enrol themselves as a company or society without examination, and this should be for those who are to come hereafter.

342. Would you begin by making the examiners pass an examination?—There are already men who have been appointed by the Pharmaceutical Society, men of ability, who are well known to be able to conduct examinations. The same difficulty existed in reference to the charter of the College of Surgeons; there were fellows and members, and the old members were aggrieved because they could not become fellows except by examination. The college passed a bye-law, that a member might become a fellow by examination at any time; and, with regard to old members, they should be admitted as fellows after a certain date, on the payment of a fee for the fellowship: in that manner all were satisfied.

343. In regard to what is called proprietary medicine, your suggestion is, that the seller of these medicines should be obliged to state if there is any poison in it; in fact, to state what it is composed of?—You have one of two courses, either to insist on the whole of the contents of the medicine being made known; or, assuming there is any substance of a poisonous nature in it, the proportion present should be stated.

344. Do you think the effect of that would be to affect the sale?—I think, with regard to those containing what would be poison, it would damage the sale very much; but it is a question, after all, of public health.

345. At this moment, the stamp has the name of the seller on it?—It has.

346. Do you not think the fact of the mere name being on it makes him responsible, and is not a sufficient protection?—What guarantee have you that he knows the properties of the drugs which he is selling? Take Holloway's pills.

347. I understand you to say during 34 years, with the exception of two proprietary medicines, you were not aware of any accident that had arisen?—I am not in my own practice.

348. Do your observations go with regard to the point you stated, with regard to giving detail in the composition, to only these two?—Only to those two: "Daffy's Elixir," and "Dalby's Carminative."

349. Mr. *Schneider.*] Are not those substances administered in too large quantities, and do not the people who administer them know them to be injurious to life and capable of inducing death?—I believe it is in a great measure owing to ignorance of the properties of medicines; I should say, from what

what I have heard regarding the effects of these proprietary medicines, that deliberate murder has not been the motive for administration, but rather a desire to quiet the children. They have given an over dose; they have not properly attended to the directions on the bottle, and a great number of deaths have been thus caused.

350. Lord *Elcho.*] You are aware, are you not, in the discussion on the Medical Reform Bill, there was an attempt made on the part of the regular medical practitioners to put a stop to quack doctors?—There was.

351. Did that succeed?—No.

352. Do you think it likely, supposing on any question of reform of chemists and druggists, the regular druggists were to attempt to put a stop to the sale of quack medicine, they would no more succeed in their attempt to do that than the regular profession did?—I think they would not succeed; the freedom of our institutions allows these things to go on.

353. You have said, as a means of examination, there should be two members of the College of Physicians, appointed by the Secretary of State?—I throw that out as a suggestion.

354. That would be simply paid officers?—Yes.

355. How would you propose those persons should be paid; by the State or by fee?—I should say they ought to be paid by fees; in the universities and colleges the examiners are paid by fees on diplomas. I belong to an examining body in the Royal College of Veterinary Surgeons, and surgeons are there paid by the fees taken for examinations and the issuing of diplomas.

356. You would not propose they should be paid by the State?—No; the candidate would get such a benefit by a document of this kind, authorising him duly to practice, and would have an advantage by the suppression of an illicit and underhanded trade, that he might easily afford to pay a certain sum for examination and diploma. After all, the diploma in pharmacy need not go to more than five or six guineas, and that would be sufficient. The diplomas for the medical profession are very costly; they provide ample funds for paying examiners.

357. Supposing some such estimate were to be adopted, on what you call the *caveat emptor* principle, that the public should know by the signs on the shop as to a man's qualification; do you think this, that I now venture to submit to you, would be a good division, that there should be two classes of examination; the higher should be able to put up "Pharmaceutical Chemist, registered," and an inferior examination, not so high a standard, "Chemist and Druggist, registered," and those who are only sellers of drugs, who do not go for examination, should put up "Druggist?"—Yes, that would be a good arrangement; but I think there should be this precaution, that, in regard to the second class you have mentioned, there should be at least a knowledge of the nature and properties of all the ordinary substances used in medicine.

358. I presume any person putting up as a chemist or druggist ought to have a certain knowledge of chemistry?—Of pharmaceutical chemistry.

359. Or a chemist and druggist?—Yes.

360. In the second class there would be a knowledge of drugs required, and their effects when mixed, as well as their chemical properties. When the chemist and druggist has gone through a proper examination he would be qualified for the dispensing of medicines?—Yes.

361. And the other class, you would not prevent dispensing; but the public would have to get them at their peril?—Yes. Of course they would have some knowledge of those who were the most qualified; and, if they choose to go to the inferior ones, they must suffer the consequences.

362. Would that appear to be to you, under all the circumstances, a substantial solution of the question?—I think it would be, from the attention I have given to the whole matter; I think the arrangement would not be without risk at the first starting, but it would still be done.

363. Dr. *Brady.*] I have one question to put to you, and it is this: if "Chemist and Druggist" is put over the door, is not the word "Chemist" a misnomer, to a large extent?—It is.

364. A large number of people who put up "Chemist" know nothing of chemistry?—There are a great number of exceptions in country towns.

365. Mr. *Ayrton.*] You have a list of articles that you think persons should not dispense; what is the necessity of education being carried beyond a knowledge of the details of the articles mentioned in the list?—I think it should go beyond that: he should know the properties of chemicals generally.

366. If he knows that, he would be qualified to sell them?—Yes. Therefore I say the examination should at first be made easy, and then I think the public would be satisfied.

367. Mr. *Roebuck.*] You do not want any great apparatus for that?—You want skilled men to test that knowledge. If you start with bad examiners no good would be done.

368. A good examiner is not a great apparatus?—But a person who understood the properties of the subjects in this list must be a man of experience and long study, and well acquainted with these things.

369. Sir *FitzRoy Kelly.*] Would you not require the power of distinguishing between one substance and another, where two happen to resemble each other?—Yes; that requires some skill and knowledge.

370. Besides the knowledge of the properties?—I would say that the examination should be more practical than theoretical. These substances should go before them, and the knowledge of them should not be tested by what they could get up by reading, but by actual observation.

Mr. JOHN SIMON, called in; and Examined.

371. *Chairman.*] You are the Medical Officer of the Privy Council?—I am.

372. It was by the direction of the Privy Council, that a report was made by Dr. Taylor?—It was.

373. You alluded to that report in your report to the Privy Council?—I did.

374. You heard the evidence given by Dr. Taylor?—I heard a great part of it.

375. Do you agree in the opinion he has given

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as to the necessity of legislation, and the suggestions he has given to the Committee?—I think it very expedient, and indeed necessary for the public safety, that there should be some sort of legislation; and expedient the legislation should be mainly in the direction that he has suggested; I cannot say legislation is equally necessary on all points.

376, Taking the opinion expressed by Dr. Taylor to be in the main, that assuming poisonous drugs to be enumerated in any law to be passed, the sale of other drugs should be left as it is without any interference with the parties who sell them, and that, for the purpose of providing protection to the public, persons selling poisonsous drugs should pass an examination; do you concur in that view?—That the business of chemist and druggist (and therewith a sole authority to sell poisons) should not be open, except to persons who have passed a certain sufficient examination, would be desirable, I think, as part of a system of law for the trade in question, but would hardly, in my opinion, be desirable as the only law bearing on that business.

377. Supposing, in the first place, the trade of chemists and druggists was not to be submitted to any sort of government, how would you deal with the danger to the public?—I would extend to all poisons the principle of the arsenic legislation.

378. Will you explain to the Committee?—So that the clandestine obtaining of poisons should be difficult. No sale of poison should be allowed except with full registration of the buyer's name and residence, and of the time, quantity, and professed purpose of his buying; nor even thus, to any person unknown to the seller, except in presence of a witness acquainted with both seller and buyer. The interposition of those forms, with the little delay which they would involve, and the possibility of making secret purchases, would, I think, greatly interfere with the use of poison for purposes of murder and suicide.

379. Supposing a person who required any of these poisonous drugs would be obliged to attend with a witness, and an entry would be made in the books of the person who sells the drugs, is that the transaction?—Yes, that is the transaction.

380. That would be dealing with the procuring of these poisonous drugs at improper places?—Yes.

381. And to a certain extent make it more difficult than it now is?—Yes.

382. With the view of dealing with the accidental poisoning which Dr. Taylor notices, and you notice in your report, what would you do with that?—The exact thing to be legislatively done must of course be defined by competent lawyers, but the object is easily defined. The object is, that any *mala praxis* by a pharmacist, should be got hold of easily and punished. At present such *mala praxis* escapes. There are acts of outrageous blunder and carelessness that pass unpunished, because, for some legal reason or other, they cannot be legally defined as acts of culpable negligence.

383. It would be desirable therefore to define in some manner what should be this negligence in the sale of poisons?—That would be a main object of legislation.

384. You would not interfere with the sale of those poisonous drugs by any one with regard to enforcing of qualification?—No. I would let it, in that respect, be governed by whatever restrictions are imposed on the general practice of pharmacy.

385. You would allow the village shops to continue selling these preparations of opium?—I do not see how you could help yourself, unless the trade of chemists and druggists were defined. If you had first given a legal definition to that trade (providing, for instance, for the qualification and registration of persons entitled to practise pharmacy), then, of course, you could say that none but chemists and druggists legally qualified should sell poisons.

386. As regards the selling of poisonous drugs in the country, I believe you have paid some attention to the great sale of opium in that direction?—There are some country districts of England where child-killing by opium is monstrous. Every one knows that in some of the manufacturing districts, where mothers are employed and children are neglected, the mortality of infants is twice or thrice what one would call the normal rate of dying, and that a considerable share of this undue mortality is caused by dosing with preparations of opium. But it is not equally well known that in certain country districts the same amount of mortality of infants is to be observed; and when the particulars of this are inquired into, it appears that the conditions are very similar to those which operate in the manufacturing districts, and that even a greater proportion of the mortality is caused by the domestic administration of opium.

387. Mr. *Roebuck.*] Intentionally?—To some extent mixed. But I should not like you to suppose that I think much of it is intentional. I do not think that, but there is a carelessness as to the result that is hideous. On this subject, the Committee would find the facts given in my last annual report, and especially with reference to the marsh districts of England. The women work in gangs, and travel about the country, leading often a very reckless and rollicking life, and leaving their children a great deal to chance, as they travel about. The children fare very badly, as the children do in manufacturing towns. To be kept quiet, they are drugged with opium. The peasantry have a tradition that opium is useful in their ague, and have got so familiar with it that many of the adults are opium eaters. Having this local knowledge of opium, they use it to children very largely, the children dying monstrously. The mothers (namely, the agricultural gang-women) appear often to be very reckless whether the children live or die. The children are an incumbrance to them.

388. Sir *FitzRoy Kelly.*] Would you for a moment lay aside the question of the sale of poisons, and tell the Committee whether, in your opinion, as a result of your experience, you think the public require protection against incompetence and ignorance in chemists and druggists in the case of making up medical prescriptions?—Against ignorance in that particular direction the public does not, I think, require protection so much as against carelessness; but, in one respect (that, I think, Dr. Taylor did not advert to), it is of great importance to the public that pharmacists should be well educated in their business, I admit that the highest quality of pharmaceutical knowledge can hardly be expected to be obtained universally throughout the country; but, nevertheless, it is most desirable for the public that the pharmacist should be competent to examine chemically the drugs and preparations which he sells,

so as to know whether (through adulteration or otherwise) they are below their standard strength, and so forth. I think the absence of that knowledge leads to inefficiency in the making up of prescriptions, and to much needless uncertainty in medical practice; for some very important medicines may be greatly stronger in some shops than in others. This want of uniformity is a serious practical evil.

389. The question I meant to ask you was, whether you think it necessary for the safety of the public, it better that chemists and druggists in general hereafter should be permitted to make up prescriptions indiscriminately; they should be subject to some examination as to fitness and as to knowledge?—I think it desirable, as part of a general system.

390. Do you think there would be any difficulty in framing the kind of examination, and appointing competent examiners to conduct these examinations in the case of chemists and druggists before they should be considered entitled, in the way of trade, to make up the prescriptions of medical men?—I think there would be no great difficulty in that; indeed, some of the difficulty I have heard adverted to to-day might be met by giving to the authority that regulated the examination a power for relaxing conditions in respect of certain thinly populated districts.

391. Without entering into details, you think it is desirable to legislate on the subject?—Yes.

392. At present, you are aware there is no restriction whatever by law on chemists and druggists for carrying on their business, both in the making up of prescriptions as well as in the sale of poisons; but you think, with regard to the making up of prescriptions (I will trouble you with a question about poisons afterwards), it is desirable to legislate, in order to secure the public against the consequences of ignorant and incompetent people carrying on this business?—As part of a system, yes.

393. Now, one word about the sale of poisons; would you remedy the evils that exist, or the facilities that exist, by which mistakes have been committed by incompetent or purely unversed men in the sale of poisons or poisonous drugs, by subjecting them also for that purpose to an examination, or does any mode occur to you by which you could secure the public against the danger to which they are now exposed?—By the sale of poisons?

394. Yes?—I suppose that is to a very small extent an evil that results from the absence of knowledge in the vendor. I do not see how that would affect the public.

395. At present, anybody may deal in any article whatever, totally poisonous, or drugs that resemble poisons, or drugs of a poisonous character; do you think legislation is necessary at all; and, if so, in what way or to what extent, to regulate or restrain the sale of poisons or poisonous drugs?—I have already said, that I think the provisions of the Arsenic Law (14 & 15 Vict. c. 13) should be extended to all poisons whatever. I further think it desirable that the sale of poisons should be restricted to the right of selling poisons to persons who may be supposed to be fully acquainted with their dangerousness.

396. With regard to one source of mischief, the imprudence and carelessness, do you see any way in which legislation can be applied as a remedy to that grievance?—Selling poisons by mistake for other things?

397. Any description of carelessness which leads to the sale of poisons under circumstances in which they ought not to be sold, such as mistaking one substance for another, or selling any undue quantity?—I suppose no law can touch that, except by bringing it under the general category of injury to life caused by carelessness.

398. Do you think, or not, that the sale of poisons would be restricted by subjecting chemists and druggists who deal in such articles to any kind of examination, which the result of this must depend whether they would be permitted to deal in such articles; do you recommend an examination?—Certainly. If I rightly understand your question, I do, strongly; legislation that (*inter alia*) would make the selling of poisons by village shopkeepers and grocers impossible.

399. Wholly?—Decidedly.

400. You think it should be so?—Certainly.

401. Sir *John Shelley.*] Does that last answer of yours go to articles employed in trade?—Yes; I should make no distinction whatever.

402. Do you think it would be possible for legislation, at this moment, to be brought to bear on the general trade of the country, that could be made workable by a strong prohibition of the sale of anything which may come under the head of poisons, under any circumstances, except by persons who have been through a strict examination?—It would be part of the system that poisons should not be sold wholesale except to chemists and druggists.

403. Unless manufacturers?—I mean, not to shopkeepers.

404. In what way would you prevent the sale of articles in daily use, to families, that are poisons, such as articles employed in cleansing grates, mouse poison, and vermin poison?—I would follow the general rule of poisons. A housekeeper really wishing to have his rats killed by poison would have no objection to enter his name as a buyer of the poison.

405. Would he buy it of one of the registered chemists who have gone through a strict examination?—Yes.

406. Is it in your contemplation that those registered chemists who have gone through an examination would be sufficiently dispersed over the country to meet the requirements of the rural districts?—Yes, generally.

407. Do you think the difficulty with regard to this might be met, as has been suggested before, by different grades of persons calling themselves chemists and druggists?—I think, if a regulative authority were provided, that authority must have power to fix qualifications and grades. It would have to distinguish what qualification is necessary for an assistant, perhaps even to fix the conditions under which pupils might take part in dispensing. To illustrate my meaning: the amount of qualification with which a man could properly fill the office of assistant in a first rate shop in London would represent also the minimum amount which should qualify for the second class of shopkeeping him for being the principal in a shop of the second class, such as might be alone attainable in country places; but, in our large towns, a higher qualification might well be expected; and, where such was the case, the sale of poisons might be restricted to the higher grade. Something of that kind might be done, but I am not prepared with the details of it.

408. I understood you strongly to say, as re-

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gards the making up of the medical man's prescription, whether written either in Latin or English, you would restrict that entirely throughout the country to persons who have gone through the examination; you do not think it would be an inconvenience: I understood you to say, with regard to prescriptions in their ordinary form, you would only allow to be dispensed by persons who have gone through the examination; would you apply that to a prescription which has been alluded to, a common prescription in a village, given by a doctor in plain English to an old woman who sells all sorts of articles in a shop?—It would not, I apprehend, be requisite to provide in express terms for the privilege of making up physicians' prescriptions. Practically this would be governed by the general law governing the right to practice pharmacy. If the grocer had the right to sell certain popular drugs, say senna and rhubarb, of course he would have authority to sell his senna and rhubarb mixed, with or without a physician's prescription. If such a prescription went to the grocer, and were in terms the grocer could understand, and ordered the grocer to mix senna and rhubarb, or any two things that it was within the competence of the grocer to sell, the prescription would be made up; but physicians' prescriptions generally could not be made up at the grocer's, and could only be made up by the skilled pharmacist.

409. Perhaps you can help us by defining in your own view the term chemist and druggist; you say, if we commence by defining who is a chemist and druggist, so and so would occur; will you clear the way by defining in your view what is a chemist and druggist?—I mean a definition founded on the man's having undergone satisfactorily certain sufficient tests of his knowledge.

410. You would say nobody should have a right to call himself chemist and druggist unless he has gone through such an examination?—You will recollect, I do not speak of it as in my opinion the first necessity that that kind of legislation should take place. I think it desirable; very desirable as part of a system; not equally desirable if to take place by itself. As a separate act of legislation, it would be open to the objection that it would, in fact, be creating a sort of spurious medical profession. That was the effect of the Irish Apothecaries (*i.e.*, Chemists and Druggists) Act of 1791, a measure probably known to the Committee, as, in many respects, a very excellent Pharmacy Act. The event of that Act was, that in 1858, when Parliament was proceeding to regulate the medical profession, and had for this purpose to define a medical practitioner, it found it was obliged to recognise as members of the medical profession all the apothecaries of Ireland; those apothecaries, having been mere chemists and druggists in point of law, but now claiming to be admitted on the medical register, on the ground that they were *de facto* practitioners of medicine. Not very different from this was the history of apothecaryship in England. The admission of apothecaries in 1815 to be a medical corporation, condoned and legalised a state of things which had been of very gradual growth, and could not now any longer be annulled, the extensive practice of medicine by persons whose original pretensions were only to practise pharmacy, and who held no credentials of medical qualification. And that would occur again, no doubt, under a law specially providing for the recognition and registration of chemists and druggists, unless special precautions were taken to debar the followers of that business from tampering with medical responsibilities.

411. In any legislation that might be as regards the future, and not the past, you agree with Dr. Taylor, it should not apply to any one who has carried on the trade of chemist and druggist?—Of course.

412. In your opinion, the examination should be easily attainable for persons carrying on the trade of chemist and druggist?—The minimum qualification (that with which a man might conduct, as principal, a druggist's shop in a country place) would be such as a first-rate London pharmacist now requires in the assistant whom he employs to dispense in his shop.

413. You would say, it would be well to hold out to the chemists and druggists that they should have a higher and more difficult examination?—Yes.

414. Mr. *Roebuck.*] Will Mr. Simon be good enough to draw up a scheme of examination that he thinks ought to be applied?—I have not the details.

Lunæ, 15° *die Maii*, 1865.

MEMBERS PRESENT:

Mr. Ayrton.
Mr. Baring.
Mr. Black.
Dr. Brady.
Lord Elcho.
Sir James Fergusson.
Mr. Charles Forster.
Sir FitzRoy Kelly.
Mr. Roebuck.
Mr. Hastings Russell.
Mr. Schneider.
Sir John Shelley.
Mr. Charles Wynn.

THOMAS GEORGE BARING, Esq., IN THE CHAIR.

DR. RICHARD QUAIN, called in; and Examined.

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415. *Chairman.*] You are a Doctor of Medicine, I believe, and one of the Members of the Medical Council?—Yes.

416. One of the Members appointed by the Crown?—Yes.

417. Have you directed your attention to the qualification of chemists and druggists?—Yes.

418. Do you consider that some examination is necessary with respect to persons who deal in drugs, or in certain classes of drugs?—Yes; I joined in a recommendation made to the Home Secretary to that effect by the Medical Council.

419. Will you state the grounds of your opinion?—It was felt to be important that chemists and druggists who had to deal with matters that may be dangerous to life, either from ignorance or carelessness, should be under some control and be required to give evidence of their competence to deal with drugs and chemicals.

420. And when you say chemists and druggists should be submitted to such a test, where would you draw a line with regard to chemists and druggists; would you oblige any one who dealt in any sort of drug in retail to pass an examination, or would you draw a line?—I should think there might be a difference in the character of the examination, but all persons who deal in poisons should know the properties of such poisons.

421. In respect of drugs not poisonous?—With regard to dealing in them, I think it is not a matter of importance. With regard to compounding drugs, such persons ought to be fully acquainted with their properties and doses.

422. In the first place, you would require some examination in respect of persons dealing with poisonous drugs?—Quite so. I should think they ought to know the properties of them. I should require a more careful and rigid examination of those who mix and compound medicines.

423. Compounding drugs would include mixing prescriptions?—All compounding. It would be difficult to draw a line at the compounding merely of prescriptions. I would like to say, with regard to one point (the mere fact of danger to life), that, besides great value to be attached to the education of chemists and druggists, who supply physicians with the agencies by which they treat disease, and who, when educated, are better capable of understanding the nature of drugs than they would be if ignorant, they would supply physicians and surgeons with far better agencies than we could obtain if they were uneducated and ignorant. Pharmacy has so much improved in the present day that drugs are better and more efficient than they were.

424. That being so, what would be the kind of examination you would recommend?—My answer would very much depend on the question, whether all persons should be registered. If the law were made so stringent, that nobody could compound medicine unless registered, it strikes me that the examination should be moderate.

425. Embracing what?—Chiefly the knowledge of the properties of drugs, and the capability of reading ordinary Latin prescriptions. There might be a higher examination for a higher class who might wish to undergo it. If it be made compulsory on all to pass an examination, and be registered, there ought to be great facilities for doing so.

426. That would be as far as the law would go, I presume?—Quite.

427. The nature of the examination being such as you have pointed out, whom would you recommend as an examining body to carry out such a system?—I know none better than the Pharmaceutical Society with its minor examination, which is sufficient, if not more than it need be, for the class of which I speak. I should not allow it to remain wholly in the hands of the society without some control from Government; this power might become a great monopoly if allowed to be in the hands of any society or any corporate body. There ought to be direct control from the Secretary of State or the Privy Council, as to the character of the examination and the fees.

428. When you use the words "some control," would you recommend that the Crown should have the power of appointing persons to belong to the Council as examiners, or in what manner?—An assessor, who would be present at the examination, and the regulations should be submitted to and approved by the Home Secretary from time to time.

429. Or the Privy Council?—Certainly; the assessor would not take an active part, but

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would merely attend for the purpose of supervision.

430. If such an examination was to be required you would place it in the hands of the Pharmaceutical Society, with certain alterations to make it more general?—There should be no difficulty whatever in admitting to the minor examination in regard to compounding and dispensing medicines.

431. Are you apprehensive, from the passing of some measure which would require a greater education of chemists and druggists, that it would raise the character of the class and interfere with the medical profession?—I do not think so; a better class would attend more closely to their own business.

432. Do you think it necessary or desirable to prohibit chemists and druggists from giving advice to persons who come into their shops?—With regard to that, it may seem hard to place a restriction on chemists and druggists to which other people are not subjected, but a "doctor's shop" is a familiar place to which to go for advice, and hence there is a temptation to the public to go to those shops, and it is done to a great extent in poor neighbourhoods and manufacturing districts. I think a clause should prohibit chemists and druggists from being systematically engaged in the treatment of diseases or injuries, or from practising as medical men.

433. It would be difficult to prove a person was systematically engaged?—It is difficult to prove most things. It would be thus: a person must not come day after day for advice; but if he wanted a dose of physic, it would be a difficult thing to prevent his getting it in a chemist's shop.

434. Mr. *Roebuck.*] If he came Monday, he might not go Tuesday?—He might not go daily and systematically.

435. Mr. *Ayrton.*] He must not go until he is cured?—Well——or——

436. Lord *Elcho.*] You have said such a clause would be extremely useful, to whom?—To the public.

437. Why?—Because it would prevent many of them being carried on in the *quasi* treatment of their diseases, till the diseases became serious.

438. It would be likewise useful to the medical profession?—I have more sympathy with the public in respect to their diseases.

439. You do not wish that as a medical practitioner?—Not in that capacity alone.

440. Sir *FitzRoy Kelly.*] I think you have had great experience in the practice of your profession for a great many years; how many years have you been a member of the profession?—Nearly 35 years.

441. You are aware now, I suppose, by law there is no restriction whatever on anybody whomsoever exercising the trade of a chemist and druggist?—Quite so.

442. Making up medical prescriptions in all cases?—Quite so.

443. Dealing in poisons of every description, without any species of limit, anybody may do that without any qualification whatever?—Quite so.

444. However incompetent, however ignorant?—Yes.

445. Then I will ask you first, in your opinion, and founded on your long experience, do you think that legislation is necessary in order to impose the necessity of some qualification, by means of an examination, before persons shall be permitted thus unlimitedly to exercise that trade?—I think it is necessary.

446. Do you think it necessary, with respect merely to the medical profession, or any particular class, or generally for the safety of the public?—I think, generally, for the safety and advantage of the public.

447. You have alluded to some resolution or recommendation which was made by the Medical Council upon this subject; would you just cast your eye over that, and tell me if that is the recommendation (*handing a Paper to the Witness*)?—Yes.

448. "Nothing exists at present to prevent any person commencing business as a chemist and druggist, or publicly vending drugs or compounding medicines; the necessity for legislation on the subject is expressed in a resolution of the Medical Council, as follows:" this is the resolution of the Medical Council to which you alluded?—Yes.

449. "That a communication be addressed to the Secretary of State for the Home Department, drawing his attention to the present defective state of the law regarding the practice of pharmacy, under which any person, however ignorant, may undertake it; and expressing the opinion of the General Medical Council, that some legislative enactment is urgently called for to ensure competency in persons keeping open shops for dispensing medicines, and for the compounding of physicians' and surgeons' prescriptions?"——

450. Mr. *Roebuck.*] Is that a report?—That is a special communication sent from the Medical Council to the Home Secretary. It was made in 1864.

451. Sir *FitzRoy Kelly.*] And since that there has been no legislation on the subject?—None.

452. Now, you have said that the examination should be of as moderate a character as possible, consistently with the object to be attained, the safety of the public; would you allow me to ask you whether you are acquainted with what is called the minor examination adopted by the Pharmaceutical Society?—Yes; I have read the programme of it.

453. We shall have the details presently; but I will, as we go along, ask you whether that embraces, first, the ability to read medical prescriptions?—It does.

454. Of all kinds that are taken to chemists and druggists for the compounding of medicines?—All prescriptions written in Latin.

455. Sir *John Shelley.*] And English?—But not French or German.

456. Sir *FitzRoy Kelly.*] I must ask you, with regard to medical prescriptions, are they generally by medical men both in the metropolis and in the provinces, in this country, in Latin?—Invariably.

457. Then, when you say in English also, are you referring to anything; are you aware any description of prescription is in use except the ordinary Latin prescription by physicians and surgeons, and other medical men?—Hundreds of domestic prescriptions, more commonly called "receipts."

458. I mean the prescriptions of medical men; are you aware of any class of medical men throughout England or Scotland, physicians, surgeons, or otherwise, regular practitioners in medicine,

cine, who deliver prescriptions otherwise than in Latin?—Very rarely, indeed.

459. It would be quite an exceptional case?—Quite.

460. Then, when you speak of the ability practically to understand medical prescriptions, you mean the prescriptions in Latin such as are ordinarily given to patients, by the regular practitioner in medicine?—Yes.

461. Both in England and Scotland?—Quite so.

462. Is it a part of the minor examination also of the Pharmaceutical Society to inquire as to the ability of the person examined to weigh and measure, and compound medicine?—It ought to be.

463. I am asking you whether it is?—I believe it to be so.

464. And to be acquainted with the different preparations in the pharmacopœia?—Quite so.

465. And all the drugs and chemicals, and other substances and articles ever used in the making up of prescriptions and the compounding of medicines?—Quite so.

466. Does the examination comprise also a knowledge, the ability to recognise the several substances, as the roots and branches and leaves, and so forth, of what may be said to constitute the *materia medica*?—Yes.

467. There is also medical botany?—Yes.

468. And chemistry?—Yes.

469. You have made yourself acquainted with the details, principally of the examination in use, which I call the minor examination of the Pharmaceutical Society; are you aware that has been in use for a great many years?—Yes.

470. And of successful application?—Quite so.

471. Are you also acquainted with what is called the major examination?—Yes.

472. That is, I believe, confined to those persons who, having passed through that examination with success, are permitted to describe themselves over their shop doors, and so forth, as pharmaceutical chemists?—A higher title.

473. And is in practice considered a qualification for the higher orders of the trade of chemist?—The relation is the same as a fellowship to a membership of a college.

474. Having obtained an answer to that question, I refer no more to the major examination but come back to the minor examination; are you aware the Government in the War Department require persons who dispense for the army to have been through that examination?—I understand that it is so.

475. Now, with regard to the examination; do you think that amply sufficient (I am always speaking now of the minor examination); do you think that minor examination, as adopted by the Pharmaceutical Society, to be amply sufficient to secure that degree of competence and knowledge which is necessary to the safety of the public with regard to the compounding of medicines?—Quite sufficient.

476. And the dealing with prescriptions?—Quite sufficient.

477. Now, with regard to dealing with prescriptions and compounding of medicines; do you think it more than sufficient; do you think any modification or limited degree or mode of examination would be sufficient for the purpose of testing or proving the qualifications of a chemist and druggist to make up prescriptions and compound medicines?—They are quite sufficient; you are aware that the examination in each subject may be pushed to any extent. The questions may be asked so as to make the examination more difficult.

478. You are aware of the particular mode in which this examination is conducted on the part of the Pharmaceutical Society; I am assuming that course to be pursued to different persons who present themselves to be examined according to the mode in which that minor examination is and has been adopted for many years by the Pharmaceutical Society; do you think that is too severe in any way in relation to the freedom of trade?—I do not think it is.

479. You do not think there would be any undue restrictions in the freedom of trade and commerce, and the liberty which every man ought to enjoy, provided it does not interfere with the public safety and the public good; you think, with a view to these considerations, it is too severe or stringent?—I do not think it is; seeing that masters of vessels and engineers are required to be examined, lawyers and clergymen also, I do not see why there should not be some examination for those who have to deal with matters affecting the lives of the subject.

480. You think there would be nothing unreasonable in requiring that any man who is to be trusted in making up Latin prescriptions or compounding medicines in conformity with Latin prescriptions; you think there would be nothing undue in the interference with the freedom of trade and commerce?—Not so far as I can see. It must be remembered that there are outlying places which could scarcely support a man who had gone through a lengthened course of study and examination. There ought to be great judgment exercised in these restrictions.

481. With reference to that answer, have you any suggestions to offer as to how, practically, you could at once secure the public by requiring a certificate that the chemist has undergone this examination, while I yet leave open the door in remote parts of the kingdom, and where the population is very limited, to somebody or other practising, but who yet may be trusted to compound medicines according to Latin prescriptions?—With regard to that there is this to be considered. There would at once be a wide field thrown open for all to be admitted to registration; that would effect an abundant supply for the present; and, if this examination be kept low, or to a limited extent, and there be sufficient time given to young men and others to prepare for it, I do not think there will be any great hardship.

482. Assuming an Act of Parliament should be so framed as to impose no restrictions at all on the existing race of chemists and druggists throughout the kingdom, but you apply this examination to those who are hereafter to become chemists and druggists, and to be interested in the compounding of medicines according to ordinary prescriptions, you think there would be no undue interference?—No hardship or interference.

483. Notwithstanding what you have said with regard to remote places?—If the minor examination is kept to a minimum, there would be no difficulty about it.

484. As I understand you to say that kind of examination as administered by the Pharmaceutical Society would be sufficient, and no more than sufficient; you have hitherto directed your

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attention to the consideration of these examinations having reference to the compounding of medicines in prescriptions. Now, allow me to ask you, with regard to the sale of poisons, do you think it is or is not necessary for the safety of the public, before any chemist or druggist should be permitted to deal in poisonous substances, that is, articles having poison in them that might be fatal to life if swallowed, to impose any restrictions, by way of examination, upon persons before they should be permitted to deal with such articles?—I think that the retail trade in poisons ought not to be undertaken by any persons except those who have passed that examination.

485. You would apply that same minor examination, as a qualification, to persons to deal by retail in poisons?—Yes, I think it ought to be so.

486. Not, of course, to wholesale druggists, or persons who deal in the article commercially?—Quite so.

487. You would apply the examination to all persons who are to be at liberty to compound medicines according to prescriptions, and to all persons who sell in retail poisons or poisonous substances?—Articles that could be used for poison. Of course, a list of those poisons should be given.

488. You have already observed upon these examinations, as now administered by the Pharmaceutical Society, when you say you would not leave in the hands of any single corporation what might be a monopoly in this examination; do you think, from time to time, it might be necessary to change the nature of the examination, and then that no change should be permitted without the sanction of the Home Secretary; or to what did you apply your answer, when you say you would not place the whole of these examinations without restrictions?—It has been found, and it is well recognised in the medical profession, that certain corporations have a tendency to establish what is called "a trade in diplomas." They are respectable men, who are now connected with the Pharmaceutical Society; by-and-bye the class may go off, and then examination and registration may be made a source of profit.

489. Sir *John Shelley.*] To whom?—To the society.

490. Sir *FitzRoy Kelly.*] Assuming these persons, subjecting them to this examination, if obtaining their certificate were to be thereupon registered, and if the registration were the condition of their being permitted to carry on the trade of the chemist or druggist, and if the fee (a small fee) were to be payable on registration, and that fee were to be fixed and determined by the Secretary of State alone?—Quite so.

491. Supposing these to be the steps by which legislation is to be effected, the examination by the examiners and the Pharmaceutical Society, the certificate of those examiners the sufficiency of the candidate, thereupon the registration, and the payment of a fee on registration, that fee to be fixed by the Secretary of State, and to be varied as he thinks fit from time to time; is it your opinion that in such a case there would be any monopoly, or a danger of monopoly which would be injurious to the public?—If the character of the examination and the amount of the fee be controlled by Government there could be no monopoly. If it were left independent, it would lead to what it has led to in other places.

492. If the character of the examination and amount of the fee are to be substantially and always under the control of the Secretary of State, you would say there would be no danger in the monopoly?—No.

493. Would you see any danger in entrusting the whole of the conduct of the examination to the Pharmaceutical Society by means of the present examiners?—Not the least.

494. Are you aware, by the present constitution of the Pharmaceutical Society, it possesses great facilities, without further experiment or proceedings, for administering this examination?—Nothing can be better than all its arrangements.

495. They have examiners, all appointed?—Yes.

496. They have had a long experience themselves, and have, also, for a long time been in the habit of administering this examination?—The Pharmaceutical Society has sought, by the character of its arrangements, to obtain the high character it has succeeded in obtaining. Dr. Pereira and Dr. Thompson, its original examiners as well as their successors, are men who have filled the highest position in science.

497. Would you also place the appointment of future examiners (the present examiners we will assume to be sufficient), would you make the appointment by the society of future examiners, as these die off or retire, to be subject to the approbation of the Secretary of State?—I should have confidence in the council of the society.

498. If any doubt existed on that point, would you see any advantage?—I think it could not be well done by the Secretary of State.

499. If they are about to appoint A, B, and C as new examiners from two or three others having ceased to act in that capacity, and it was necessary to submit those names to the Secretary of State, do you think there would be any difficulty or danger arising from that, or would there be sufficient security?—I should not fear any such danger.

500. *Chairman.*] The Secretary of State would have very little control over the appointment of examiners, the name would be simply submitted to him?—That is all.

501. Sir *John Shelley.*] Following up that question of the chairman, should you advise that in order that the Secretary of State should have some power, one or more members of the medical council should be appointed by the Secretary of State to act on the council or with any board of examiners?—A simple assessor, whose sole duty it should be, would be better.

502. I understood from your evidence that you are decidedly of opinion that examination into the qualification of a chemist and druggist is required?—Quite so.

503. Your evidence has principally gone towards persons dispensing drugs under prescription?—Compounding and dispensing; I think the compounding of drugs generally in use is quite as important as the mere dispensing of prescriptions.

504. Some of us are laymen in this matter; what would you include under the word "compound?"—There are, for instance, all the preparations in the pharmacopœia. Chemists, moreover, find, for example, that certain salts or other matters are more soluble in one substance than another: take tannic or gallic acid; he finds there can be made a solution in glycerine which becomes

becomes a very useful application, but the mode of making which would never suggest itself to his mind; whereas the chemists who are daily dealing in these articles prepare and submit them to the physicians. There are many things of that kind where the educated pharmaceutist will prepare compounds and submit them to the physician for his approval and use.

505. May I ask you, with all respect, does your knowledge as a medical man extend to the rural districts generally, or has your experience principally been in town?—I may say, rural districts, and towns and hospitals; I was an articled pupil for five years in a rural district.

506. Take any district that may be selected at a distance from a large town or a large village, 10 miles from a large village; would the answer you have given in reference to this question of examination apply to the small shopkeeper of a small place, looking to the interest of the public?—When a small shopkeeper undertakes to make up a prescription, and to keep a quantity of poisons, he ought to be obliged to pass the examination I have in view.

507. I understand your answer to apply to persons equally in the rural districts making up prescriptions and dealing with poisons?—Pretty nearly the same.

508. Am I right in believing that the dealing in drugs and dispensing of medicines under prescriptions is a very small proportion of the amount of drugs sold in the year?—That depends on the peculiar character of the trade of the individual.

509. I take the case of the chemist and druggist generally; am I wrong in believing that the drugs sold under prescription is only a small proportion of the amount of drugs sold throughout the country?—You must ask a chemist that.

510. What is your opinion on it?—The idea never occurred to me of a distinction between the mere selling of drugs. I should say this, that the making up of dangerous drugs into prescriptions far exceeds the sale of dangerous drugs.

511. Am I to take your answer as applying to the making up of dangerous drugs and the selling of dangerous drugs?—Quite so.

512. How do you deal with drugs not called dangerous drugs; would you require for that an examination or not?—No; I would give a list in the schedule of dangerous drugs. Too much of anything is dangerous; too much food would be dangerous.

513. Looking at the state of society, what would you do with regard to the counter, the man who sells over the counter that which is required day by day by the poor, and which can hardly be called in common parlance a dangerous drug; would you require a person selling castor oil?—That would not be in the schedule.

514. How do you do with a person who sells over the counter castor oil, rhubarb, and those things; do you require examination or registration, or anything?—Not the least, not the slightest.

515. The evidence you have given applies to drugs, and not to innocuous drugs?—To poisonous drugs, which should be named.

516. Then, taking the country; a man who sells matters that are required for agriculture, poisons; what should you do with them?—I said retailing poisons; corrosive sublimate and arsenic are sold in wholesale quantities for agricultural purposes.

517. Suppose I went into a shop to buy something to kill rats?—I think you should not be able to get it unless you went to a registered chemist.

518. You would not allow me as a farmer?—Certainly not.

519. I only want to know, I must go 10 miles to the country town to get my stuff for killing rats?—You need not go specially. Let me observe, that you would have much more reason to complain if you were living in Germany; you could not get sal volatile or soda. I mention this merely to show how much better off we should be.

520. We are better off now; should we be better off provided, if I went to buy stuff to kill my rats, I should have to send to a country town to get it?—I would do as much as possible to prevent the retail of poisons. I think it would be worth the inconvenience.

521. It is so important, with reference to the saving of life, that the whole country are to be put to what you admit to be an inconvenience?—To a limited inconvenience.

522. Now, with regard to matters used in the house for cleaning grates and so on, is the housemaid to send to the country town, 10 miles off, for vitriol and so on; I ask whether your view is the same?—I think there ought to be a restriction on the sale of poisons.

523. May I take it generally, you are so impressed with the necessity of the protection of life, that you are prepared to recommend this Committee to legislate to the extent of putting persons to the inconvenience you have alluded to for the sake of restricting the sale of poison?—I am quite sure it is desirable for the safety of life.

524. With regard to the Pharmaceutical Society, may I ask you, are you aware of what it is constituted?—Yes, I have followed its history.

525. Are you aware of who are the examining body?—Yes.

526. Are you aware that, with regard to the examining body of the Pharmaceutical Society, a great portion of them have not been examined themselves?—Yes, quite aware of that.

527. Would you say that at this moment in the trade the chemists and druggists throughout the country and particularly of the large towns?—There are.

528. But persons carrying on the trade of chemists and druggists, who are quite as competent to know the use of medicine as some of the examiners in the Pharmaceutical Society?—That I do not doubt.

529. Do you think, looking at that answer which you have given, that it is right to call on a man who, we will say, lives at Manchester or Leeds, and who has carried on a large business as a chemist and druggist, who is highly respected, and who is up to his work as well as anybody in London, to call on him to register, and have a certificate given to him by persons not a bit better qualified than himself?—He is only required to go through a mere form; to send his name, with a small fee.

530. Put yourself in the position of that man, would you like it?—I had to do it when the Medical Act passed; I had to register, and pay 2*l.* as a fee.

531. But then you were admitted to some voice in the management of the society?—Not at all.

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532. Now, with regard to this examination; in one answer you said you thought this minor examination ought to be a very moderate one?—Quite so.

533. I understood you to say the present examination is more than it ought to be?—I was never present at an examination; the subjects are what they ought to be, but the examination in each might be easily pushed or extended.

534. By that moderate examination, which, I understand you to say, you wish to keep moderate (and the Government is to have some control to prevent its going beyond), that examination has gone to selling dangerous drugs?—To selling dangerous drugs, and compounding and selling medicines.

535. In any examination, you would confine the question of examination solely and exclusively to that?—Quite.

536. Are you acquainted with the Apothecaries Act?—To some extent, I am familiar with it.

537. That Act affected a society that was incorporated in the reign of King James; did they not establish a board of examiners; do you know these Bills?—Yes; I have looked at the Bill.

538. With regard to the Apothecaries Act, 55 George 3, was not a board of examiners established in that case very much on the principle mentioned in No. 2 Bill?—Without referring to it, I could not say.

539. You mentioned, in the course of your examination, the question of these fees that are to be paid being made a matter of profit to the society?—They might be made.

540. And supposing any fee was paid for registration to the Pharmaceutical Society, it is a matter of course, is it not, it would be an increase to their funds, and therefore a profit to that society?—Quite so.

541. Do you not think that persons of the character I alluded to just now, whom you admit were in quite as high a position as chemists and druggists in the country, if they are called upon to pay a fee to this society which is to add to the profits of the society, ought they not to come in, in some shape or other, and have the management of the society, in your opinion?—Certainly.

542. On the principle of taxation and representation going together?—Quite so, if they became members, paying an annual contribution. If they were to pay merely a registration fee, that is a different thing from becoming a member.

543. It would be an advantage to the public that the Pharmaceutical Society, assuming it was to be established by legislation as the examining body, should extend their arms as far as possible throughout the country?—Quite so.

544. Will you tell us whether the Pharmaceutical Society has succeeded in extending its roots and branches into the country generally?—I do not know and cannot say.

545. You do not know of your own knowledge?—I only know that wherever they are they are very much respected.

546. You would think, would you not, whatever body it was that was appointed under legislation to be the ruling body, in this case should, as far as possible, have power and influence throughout the country at large?—I do not think that is essential to it.

547. Do you not think it would be advisable, take Manchester for instance, that whatever society was appointed to carry on this examination should have equal ramifications in a town like that?—The Colleges of Physicians and of Surgeons may have such ramifications as you mention, but it is accidental how far they extend.

548. Supposing that to be the case, would you not be establishing that which in the first place you expressed your fears of a monopoly?—There would be that danger, except it was under proper control.

549. The object being, it should be as easy as possible for all persons to become qualified as members?—With regard to the minor examination, which admits to registration, there should be no difficulty whatever. With regard to the major examination, and the management of the society, that should be left in their own hands.

550. I would not suggest that persons not being members should have control over a society of which they are not members; assuming the chemists and druggists throughout the country were called on to subscribe to this society, should they not have some voice in the appointment of examiners, and other matters of that kind?—I do not think it is necessary for the mere registration fee, for placing the names on the list.

551. Mr. *Black.*] You said that there may be some danger of a monopoly if the registration were entirely in the hands of a body, such as the Pharmaceutical Society; now, do you think that the Privy Council would be a good body to test whether the examination and rules of the Pharmaceutical Society are too stringent?—I think a very good body. They have to decide on the general medical education in connection with the Medical Council. It is vested in them to decide.

552. Might not the Colleges of Surgeons and Physicians in this country be probably a better body, if they had delegates to regulate these things?—I think the action of the Government would be more independent.

553. But do you think that those who had passed the examination of the Colleges of Surgeons and Physicians would not be quite qualified to carry on the trade of drugs at druggists and chemists without going through any examination by the Pharmaceutical Society?—Certainly they are; their privileges are always preserved.

554. It would not be necessary that any one who has passed the examination of these colleges should pass this examination?—Not at all; their rights and privileges are quite secured.

555. I think you stated you thought those who carried on the trade of druggists ought not to be authorised to prescribe?—They ought to be required not to prescribe, not systematically to prescribe.

556. Supposing I was to go into a druggist's shop and say, "I have a sore throat, I wish you would give me something that might be useful;" when he prescribed a gargle or something of that kind, it should not be allowed?—The suggestion I made was, that the chemist should not be engaged in the treatment of diseases and injuries systematically, which is a different thing from giving such general advice as a friend might give.

557. Poor people go to a druggist's shop?—Yes; it is the systematic going out and visiting and treating diseases at home which is injurious to the public.

558. Lord *Elcho.*] You have spoken in favour of a moderate examination, and recommended that examination should be conducted by the Pharmaceutical Society: you are aware there are

are two Bills before Parliament, one promoted by the Pharmaceutical Society, and another promoted by the United Society of Chemists and Druggists: why have you, in proposing a new society of examination, selected the Pharmaceutical Society to be the conductors of that examination, instead of the United Society of Chemists and Druggists?—This was so admirably arranged and so perfect, that it might be very well accepted.

559. What is your knowledge of the United Society of Chemists and Druggists?—I know nothing of that society; but of the Pharmaceutical Society I know a great deal.

560. How does that happen, that you know nothing of the United Society of Chemists and Druggists?—I never heard where they existed; I have never seen any of their publications; I have never attended any of their lectures, or seen their museum or library, or know of their examinations.

561. They claim a larger number of chemists and druggists than the other?—I have heard that they made such a claim, but I know nothing about it.

562. As a medical man you have a knowledge of the Pharmaceutical Society?—Yes.

563. What is that founded on?—On observation.

564. In what way?—As to the mode in which their business is conducted; their laboratory, their museum, their journal, and as to how they manage their affairs.

565. They have a journal?—Yes.

566. Have they a training establishment?—Very efficient.

567. Where?—In Bloomsbury-square.

568. Have you visited it?—I have, and with great interest.

569. And a museum?—One of the best I have ever seen.

570. A lecture room?—Yes; I have attended scientific lectures there.

571. And have they been long established?—I think nearly 25 years.

572. And, as a medical man, do you recommend to this Committee that, in any measure of legislation, it should take as a basis this body that has existed for a certain number of years?—They could not do better with proper control.

573. And which has done service for the medical profession by training men who can properly compound their medicine?—Quite so.

574. And at the present moment, if you give me a prescription, you would recommend me, as a security to that prescription being properly made up, to take it to be made up by a person examined by the Pharmaceutical Society in preference to one who had not?—If I had no personal knowledge of the chemists and druggists in any place, and I knew one to be a member of the Pharmaceutical Society, I should prefer the member of the Pharmaceutical Society, as I said they are generally well educated men.

575. As a medical man, you have no knowledge of the United Society of Druggists?—None whatever.

576. Do you think, generally speaking, that the members of the College of Physicians have any knowledge of the United Society of Druggists, as a body, with regard to the examination, education, and training, for competence in medicine?—From what I hear I do not think they have.

577. Sir *John Shelley.*] There is no such chartered body?—No.

578. Lord *Elcho.*] Irrespectively of that, to the best of your knowledge and belief, have the United Society of Chemists and Druggists done anything for the promotion of education?—Not that I know of. It may be my ignorance of the fact.

579. With reference to the Pharmaceutical Society, I gather from what you have said, whilst retaining that as the basis of any new system of education, you would liberalise?—Undoubtedly.

580. You would throw its portals open?—Yes.

581. Every person now excluded would be a chemist and druggist registered under this Act, supposing an Act to be passed, would become one of the constituent bodies of the Pharmaceutical Society?—There is a great distinction between mere registration as qualified to compound and dispense medicines and becoming a member of this Society.

582. Sir *John Shelley.*] You draw a great distinction between the mere registration and the becoming a member of the Society?—Yes.

583. There is nothing in this Bill, No. 2, is there, which suggests for a moment that those who are registered should become members of the society?—I think not. There should not be.

584. Do you see any objection to the person being so registered under the Pharmaceutical Society being put on an equality with others, if they might call themselves pharmaceutical chemists?—I do; because the portals would be thrown open so widely upon registration that persons unworthy of the higher distinction might be admitted. Persons ought not to get indiscriminately a higher distinction, which depends on character and examination.

585. I alluded to persons in Manchester who were admitted to be as high a class of chemists and druggists as any member of the Pharmaceutical Society; in that case do you see any objection to a man of that class calling himself a pharmaceutical chemist after he is registered?—Certainly not. He would not thus become a member of the Pharmaceutical Society, which is another thing.

586. Lord *Elcho.*] Under the Medical Act there was nothing as to registration?—No.

587. The compulsion was of a negative kind; it was in this way men were induced to register: certain titles were acknowledged in the Act, and no person unregistered was allowed to use them?—Not that exactly; no one who was not registered could hold certain appointments, nor could he recover debts.

588. Or take certain titles?—I beg your pardon; that is what we are trying to obtain now. Henery, who was lately convicted, called himself "Doctor;" a doctor, though he was not a doctor; anybody may take a title.

589. Mr. *Ayrton.*] He is registered by a particular title under the Act, but he may assume and call himself anything he likes?—Anybody may call himself what he pleases if he does not "pretend" to be registered.

590. Under the Act he is registered by a particular title, and put on the register?—Anybody may call himself a doctor, and, if he be prosecuted for doing so, he may say, I am a doctor of divinity or a doctor of laws. A man may write on his door "surgeon." It has been tried repeatedly.

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591. Lord *Elcho.*] He cannot profess to be registered under the Act?—Quite so; he cannot use the word "registered."

592. With reference to the Medical Act, you come under that; a medical council for the regulation of examinations and the general control of these matters, and as a council you have a certain number of persons appointed by the Crown?—Six.

593. In the same way as the Crown appoints assessors or members of the Medical Council, you propose there should be some persons appointed by the Crown on the Board of Chemists and Druggists?—At the examinations only; not to interfere generally with the proceedings, but to be present at the examinations.

594. And you imagine there would be no difficulty in giving such a form and condition to this new body that it would do all that is required for the purpose, and it would do just this. If the Pharmaceutical Society got this under the new system that would be desirable?—I think so; I should be disappointed if it was not so.

595. You propose two examinations, a major and a minor, and no person who has not passed such an examination should be allowed to compound medicines; how would you enforce that?—Under a penalty; but it should not be sued for except with the sanction of the council of the society.

596. Do you think it would be possible at once to establish such a system as that?—Not immediately; certainly not.

597. By "not immediately," what would you mean?—Three or four years hence, say in 1868, that those now called chemists and druggists should have a claim and reasonable time to be registered as such; nobody after that should compound and dispense medicine except he has passed an examination and was registered.

598. You have the difficulty raised by Sir John Shelley with regard to outlying places, a difficulty you yourself admitted?—I quite admit it.

599. Especially with reference to the difficulty of the sale of poisons by wholesale or retail in country places; now, with regard to security to the public in dispensing medicines and prescriptions being properly compounded, do you think, as a first step, it would be sufficient that the title men have over their doors should be so well known and evident that it should on the *caveat emptor* principle, a man going to the right place?—That would be fair and judicious. In that case the present minor examination would answer.

600. What might you say to such a distinction as that those who are registered under the Act, or passed the minor examination, should be entitled to put on their shop, "chemist and druggist, registered?"—I quite approve of that.

601. All who go to the major examination should be entitled to put on their shop, "pharmaceutical chemist, registered;" and that all other persons selling drugs, whether wholesale or retail, whether they make up prescriptions or do not, should be simply entitled to put up the word "druggist?"—That, I think, is a very fair consideration; I should not object to such an arrangement.

602. Do you think such a clause as this would give the public such security as would be necessary: "That any person assuming the name of pharmaceutical chemist, or chemist and druggist registered, or any name, style, or title pretending to be a legally qualified pharmaceutical chemist, or chemist and druggist, and not be registered under this Act, should be liable to a penalty not exceeding;" and so on?—I approve of that.

603. Now, as to the poison difficulty; you admit there is very great difficulty, owing to the want there is, unhappily, of poison in the ordinary business of life, and not medicinally, but for other purposes, especially in the rural districts; can you throw a line between the sale and the non-sale of poisons: that, I think, you admit?—Yes.

604. You said it was with a view of saving life you thought nobody should sell poisons who had not passed the minor examination; I want to know what you mean by saving life; do you mean the saving of life by the mal-compounding of medicines, or the sale of poisons purposely for the destruction of life?—Carelessness by which poisons are sold by people knowing nothing of their properties.

605. Poisons should not be sold at a village, but at the village 10 miles off, where there is no intention to commit crime by the administration of poison; such a provision as that would be no safety?—There should be a further prohibition. I presume poison is not to be sold without knowing the person by the person who sold it.

606. That is another question; the mere fact of a poison being sold to anybody who went for it at a village or a town, that would not be met?—Not alone.

607. It would not be met by that alone?—Not alone.

608. Then, with regard to destruction of life, you look to something further?—Yes.

609. What do you look to?—The person selling poisons should be registered and under control; it should be known who is engaged in the sale of poison; the police should have a knowledge who had poisons for sale.

610. Mr. *Roebuck.*] Retail?—Retail entirely; and the person who retails those poisons should not do so without feeling satisfied he is giving them to a person whom he knows, and he should also keep the address and the name of the person and the object for which the poison was purchased.

611. Lord *Elcho.*] The officer of the Board of Health suggested, as a practical means of preventing crime, that there should be, as he expressed it, as much friction as possible attached to the procuring of poisons; he suggested that poisonous drugs should only be obtained on application of persons applying his name and having a witness to the act of purchase: does it appear to you, with regard to regulating the sale of poisons, this is a good way to try and endeavour to establish means of safety?—Active poisons and insiduous poisons ought not to be sold by a person unless he knows the purpose for which they are intended.

612. And the person purchasing should sign his name and have a witness?—Most certainly.

613. Do you think such precautions as are suggested by the officer of the Board of Health would give security against the sale of poisons for such practices, whether that sale take place in town or villages?—It would greatly tend towards it, but it would be still better if the person who sold the poison had a knowledge of what he was selling.

614. Why so?—He would have a far greater fear of giving it out of his hands if he knew what its effect was likely to be.

615. That

615. That would require, assuming the person who sold it did not know it was poison, that he should be obliged to get from the person to whom he sold it the object and intention, and so forth?—Quite so.

616. Would not that be impossible?—I mean this, that in no country grocer's shop oxalic acid, sugar of lead, and the like, should be kept, because the grocer does not know that oxalic acid and sugar of lead are the dangerous poisons they are.

617. That is a point whether he knows that they are poisons; I want to know whether you do not think the mere knowledge that the drug is poisonous is a sufficient security against the purchase of that drug for that purchase?—It should combine both "the friction" and the knowledge of the drug.

618. With regard to the selling of one thing for another, would not that be met both in town and village, that under this Act poisonous drugs should be kept on one shelf, and labelled "poison," and kept in certain paper or bottles of a certain colour?—It would be a further security to have at least a limited amount of knowledge.

619. As regards danger to the life in the making up of prescriptions, no doubt the knowledge would be desirable of the properties of the different drugs, but I do not see how the knowledge that one drug is a poison and the other is not would give safety to life against the purchase of those drugs for malpractices?—I think the person, knowing the characters of poisons, would think much more of selling them than the man who merely sold them as a matter of trade.

620. Now, in a village, suppose I intend to purchase poison to administer to somebody, and ask you for so much arsenic, how would the knowledge whether you have it or have it not prevent my purchasing that, and entering a false character with it?—I think if a man knew that arsenic was poisonous (I refer not to arsenic alone, but to other things) that he himself would make his own police regulations, and use the fullest precautions.

621. Putting yourself in that position, would you suggest it should not be done?—I would not sell poison to you at all unless I knew you personally.

622. Would it not be sufficient, as a precaution against my making an abuse of this, as a certain precaution, that I should sign my name, that you should inquire who I was, and perhaps I should have a witness to the transaction?—In the case of arsenic this might suffice, but it remains to describe what are the other poisonous drugs.

623. But in the village store there the things are required for agricultural and other purposes; in out-of-the-way places you would have a difficulty?—The difficulty would be so slight that I should object for the best of reasons to it.

624. Generally speaking, I gather from your evidence you think the *caveat emptor* principle of legislation would be a first step and a safe one?—To a great extent it would be.

625. Mr. *Schneider.*] Following out what Lord Elcho asked you, with regard to the importance of selling poisons in a shop, would that be an important step in doing away with it?—It would greatly contribute to it.

626. You would advise that any man who possessed poisons should keep them separately?—Yes.

627. Do you not think that the custom that the superior class of chemists would get would be so much greater than that which the unregistered chemists would get that it would tend to induce all persons to become registered?—I should hope that such would be the result. Dr. *Quain.* 15 May 1865.

628. And, therefore, his plan might be adopted without any great practical inconvenience in the first instance, and it would tend by degrees to bring about that state of things that you would wish to see verified?—Yes.

629. But, with reference to the examination, you see no particular reason why the Pharmaceutical Society itself should have that examination, simply that they are the best society, being well established and well conducted?—Quite so.

630. You would see no objection to the Medical Council, or anybody selected by the Crown?—Why not use what is existing?

631. My object has been directed to this, whether with reference to the very large number of chemists and druggists that there are in the country and the expense of getting to London, whether it would be desirable to have branches of examiners appointed in large towns and different parts of the country so as to save expense?—That should be done under a central body of examiners.

632. But the question is, whether the Pharmaceutical Society could do that so efficiently as it could be done under the Crown?—The thing could be done by examiners in large districts in the north and west of England.

633. You do not think it a *sine quâ non* that everybody should come to London?—Certainly not; it could be avoided.

634. Sir *James Fergusson.*] In case the condition of the sale of poisons does not appear sufficient, do you consider if the person is not known to the chemist himself, he ought to bring a certificate with him of some responsible person as to his being fit to be provided with poison?—Either that or in the presence of a witness.

635. But that in all cases of the sale of poisonous drugs the names of purchasers should be required?—Yes.

636. Dr. *Brady.*] You have seen that report (*handing a document to the Witness*)?—Yes, I have.

637. That is a report by the Medical Council? Yes.

638. Do you concur with that?—I do.

[*The following Document was handed in:*]

"REPORT of a Committee of the General Medical Council on Pharmacy.

"In 1864 the General Medical Council represented to Her Majesty's Government the necessity of regulating by statute the practice of pharmacy by chemists and druggists throughout the kingdom. The Committee are of opinion that this necessity continues as cogent as ever, and that the Council ought to encourage and support any approved measure for effecting such legislation.

"Two Bills for the purpose have been introduced into the House of Commons during the present Session, one promoted by the Pharmaceutical Society, the other by chemists and druggists not belonging to that body; the Bill

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of the latter is confined to England and Wales, that of the former to Great Britain.

"After carefully considering both Bills, the Committee are of opinion that the preferable mode of legislation is that which adopts the Pharmaceutical Society with the Pharmacy Act of 1852 as a basis. They think the Bill promoted by the society well fitted to attain various important objects and reasonable in its demands for powers and privileges.

"The main objects of the Bill are to form a register of legally qualified pharmaceutical chemists, to prohibit the use of certain pharmaceutic titles by persons not on the register, to confine to those registered the privilege of executing the prescriptions of medical practitioners, subject to the provision named, but not to restrict the sale of medicines asked for in any other manner.

"The Committee desire to bring before the Council certain defects, which it appears to them necessary to correct before the Bill becomes law.

"1. The Bill should be altered so as to apply to Ireland as well as to England and Scotland. They are not aware that any state of things exists in Ireland to render the regulation of pharmacy by the State less necessary there than in Britain.

"2. The Committee are of opinion that a clause should be inserted in any Pharmacy Bill rendering it imperative on chemists and druggists to follow, in compounding prescriptions, the formularies of the British Pharmacopœia, unless otherwise directed by the prescriber.

"3. The Committee consider that the promoters of a Bill, probably from a desire to disarm opposition, propose to admit on too easy terms into their society pharmaceutical chemists and druggists not now belonging to it. The proposal is to admit all who offer themselves for examination, or who produce a certificate from a qualified medical practitioner that they have been in the practice of dispensing medicines from the prescriptions of medical men before January 1st 1866. The latter alternative implies a facility of entrance which will be apt to lead to abuse. The Committee are of opinion that more satisfactory evidence of qualification should be required.

"4. The last important defect in the Bill which the Committee have to notice is, that no adequate provision has been made towards preventing registered pharmaceutic chemists from converting themselves into unqualified medical practitioners.

"Looking to the history of medical practice in this country, the Committee see great danger to the interests of the public and of the medical profession from the body which will be constituted by the Bill, should it become an Act in its present shape. The General Medical Council, in carrying out the objects of the Medical Act, have raised, and it is hoped may raise, the qualifications of legally qualified medical practitioners. But their labours will be in vain should the creation of a new race of unqualified practitioners be inadvertently encouraged by an Act of Parliament. It is well known that many existing chemists and druggists, both members of the Pharmaceutical Society and others, practise medicine, although unqualified by law and not competent by education; to a certain extent this practice may be inevitable, and at all events it cannot be prevented. But the existence of it gives peculiar facilities and temptations to the pharmaceutic chemists to embark largely in irregular medical practice as an unqualified practitioner.

"The Committee have considered whether the danger here indicated might be averted by extending the jurisdiction of the General Medical Council, so as to include control over pharmaceutic chemists as well as over practitioners in medicine. But they are of opinion that such a plan is at present attended with difficulties.

"By clause 55 of the Medical Act chemists and druggists are expressly exempted from the provisions of the Act, so far as the selling, compounding, and dispensing medicines is concerned. Nor is there any provision in the Act which gives the Medical Council any greater power to prevent chemists and druggists from practising medicines than the Act enables the Council to exercise over all other unqualified persons. It is plain, therefore, that the Act did not contemplate the exercise by the Medical Council of any control over chemists and druggists, and the Committee considers that it would be unwise to seek to alter the existing relations between the Medical Council and chemists and druggists.

"The Committee have further considered whether the danger they have pointed out might be averted by some simple provision in the Pharmacy Bill. By section 17 of the Bill of the Pharmaceutical Society it is declared that—

"'Nothing in this Act contained shall extend or be construed to extend to lessen or prejudice, or in any wise to interfere with any of the rights, privileges, and immunities heretofore vested in and exercised and enjoyed by any duly qualified medical practitioner.'

"This clause sufficiently protects medical practitioners in such right of practising pharmacy as they have hitherto enjoyed; but it does not attempt to prevent pharmaceutic chemists from practising medicine. Considering their peculiar temptations to practise it, however, some check seems desirable. The Committee suggest that this object may be attained in some measure were the following clause to be added to section 17, viz.:—

"'Or to entitle any person registered under this Act to practise medicine or surgery, or any branch of medicine or surgery.'

"The members of the pharmaceutic body would thus have constantly before them the sentiments of the Legislature as to the principles on which the Pharmacy Act was founded. The Committee have reason to believe that the council of the present Pharmaceutical Society have every desire to discourage the practice of medicine by its members; they therefore apprehend that no opposition would be made to the addition of such a clause.

"The Committee call attention to the fact that the Bill proposes to confer on the whole body of chemists and druggists the right of dispensing and selling medicines without any control on the part of the Government, except such as is exercised under the Pharmacy Act over registered pharmaceutical chemists. The medical profession has not been so dealt with in the Medical Act. The Medical Council is properly restricted in its action by the medical corporations and universities, and is also controlled by the

the Privy Council. They submit that the whole profession of pharmacy ought to be subjected to some control.

"The Committee recommend that the above observations, after conference with Mr. Ouvry, should be laid by the President before the Secretary of State for the Home Department, and the Chairman of the Select Committee on the Chemists and Druggists Bills.

"*Henry W. Acland,*
"Chairman."

639. Do you think it would be desirable that a man selling drugs should have a knowledge of the properties of those drugs?—Decidedly; I would desire to impress that on the Committee.

640. I mean wholesale druggists?—I think they require that for their own benefit; as a matter of trade I think they will acquire it.

641. Is not the Medical Council subject to the Privy Council?—To some extent it is.

642. Do you not think, for the safety of the public, that the chemists and druggists should have a knowledge of compounding?—Certainly.

643. Not only as to the pharmacopœia, but generally?—The compounding of medicines.

644. In your opinion they cannot with safety compound medicines without that knowledge?—Certainly not; they would do it badly.

645. Is it your knowledge that uneducated persons keeping shops are more likely to give facilities for the sale of poisonous drugs than men educated?—I think so; I think ignorance would lead to more carelessness.

646. And on the general principle you think education would be a protection to the subject?—Decidedly, provided it is not so strict and so extended as to deprive them of the useful agencies of chemists and druggists.

647. With regard to small shopkeepers in the country, should they be allowed to sell poisonous substances at all; for instance, arsenic?—That question to some extent opens the whole subject we have been discussing to-day. My impression is, that they ought not to be allowed to retail dangerous poisons without being examined.

648. Mr. *Ayrton.*] Are you aware of any accident having occurred from want of knowledge on the part of the seller of a poisonous substance, that the substance was poison?—Do you mean the compounder or seller.

649. From any cause?—I have known cases of persons being killed by poison accidentally, and it would be difficult to say whether it arose from carelessness or ignorance on the part of the dispensers.

650. I want particularly to know if you ever heard of a case or knew of a case of life being endangered from want of knowledge on the part of the seller of a poisonous substance, that the substance was poisonous?—Certainly.

651. Can you remember any case?—The latest case that occurred to me is this: I ordered a preparation of iron *(ferrum redactum)* for a patient, and ordered a drachm in 15 papers; I went on the following day, and found the patient excessively ill, and on inquiry I found she had a packet of papers called rust of iron, each of which contained half a drachm. I ascertained that the chemist had never heard of *ferrum redactum*, and never knew of so small a dose as two grains of rust of iron being given, and he thought I must have mistaken it, and he gave half a drachm for each dose.

652. Sir *John Shelley.*] In London?—Yes.

653. Mr. *Ayrton.*] And that is a poisonous preparation?—Not a poison, but a large dose, and in this instance injurious.

654. Lord *Elcho.*] Was that a pharmaceutical chemist?—No.

655. A member of the United Society?—I cannot answer that.

656. Mr. *Ayrton.*] My question is confined entirely to what are called poisonous substances; whether you ever knew a case applicable to poisonous substances?—I remember an instance of a person mixing a drachm of extract of henbane instead of tincture of henbane, which might have led to serious consequences.

657. Is that a poisonous substance?—Yes.

658. Sir *FitzRoy Kelly.*] Where did that happen?—In Ireland.

659. Mr. *Ayrton.*] Is that a case of frequent occurrence?—It is impossible to say; a patient tells you his medicine has not had the same effect; that he got it made up here and there, and that it was not the same; and you cannot say whether this arises from ignorance or carelessness.

660. I am particularly wishing to draw your attention to the distinction between the compounding of feeble or bad drugs, which do not respond to the expectation of the physician, and the selling poisonous substances, not knowing that the substances were poisonous; whether you recollect any case except the one you have mentioned?—That is very limited; suppose a person had taken a wrong remedy, and the effects were serious though not fatal.

661. I am only asking your experience?—The difficulty of answering that question is this: if a patient is killed, as I have known persons killed, by taking wrong remedies, you ask the compounder how this has occurred. The compounder says, "Oh! dear me, I made a mistake;" you do not know whether he really did not know what the proper doses were, or whether he was careless. For example: it was usual, in a hospital, to keep in the ward what is called anodyne draught. The nurse went for a supply of this, and the dispenser gave a strong solution, there being a grain in each drachm, she gave that as an anodyne, and instead of one-eighth she gave eight grains; that arose from the man not knowing what were the proper doses.

662. That was the case of having a compound already prepared?—If he was a better educated man, or knew what the dose was, he would not have dared to have dispensed such a thing without giving cautions with it.

663. Are not these what may be called mere mistakes, taking down a wrong bottle; not resulting from want of knowledge of the fact whether the thing sold is a poisonous drug or not?—It is difficult to answer the question whether it arises from carelessness or ignorance.

664. Are there not some cases, not inconsiderable, in which medical men write prescriptions in a way which leads to mistakes, such as morphine instead of opium?—There are very many cases, I confess, as a physician, where well-educated pharmaceutical chemists may have opportunities for correcting the mistakes made by physicians writing, for example, in a hurry, or when disturbed by being spoken to whilst writing.

665. Physicians and surgeons are apt to make mistakes, are they not, in the modes in which they

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they write prescriptions?—They are liable to do so.

666. And if not corrected they lead to calamities?—Decidedly.

667. Dr. *Brady.*] That would show the necessity of having pharmaceutical chemists better educated?—Yes.

668. Mr. *Ayrton.*] Do you think it desirable that pharmaceutical chemists should be well educated in assisting physicians and surgeons in conducting their business?—A well-educated pharmaceutical chemist would be and should be of immense value to physicians in curing their patients, by supplying them with good material.

669. Is that one of the leading purposes for which you would have them examined?—That is one of them.

670. By the present law, the apothecaries compound their own medicines?—An apothecary is one who treats disease and prepares his own remedies.

671. No one having a right to act as an apothecary unless he has been examined; is not that the law?—Quite so.

672. And he is liable to a penalty if he does so practice?—Yes.

673. Therefore, any person compounding medicine, and prescribing from his own knowledge, must be examined?—Quite so.

674. When that law was passed an express exemption was made in favour of chemists and druggists, who did not undertake to dictate to the person who purchased the application of the chemical or drug for medicinal purposes?—I think so.

675. So that the Legislature has laid down the clear distinction between persons who merely sold chemicals and drugs, leaving to the purchasers the disposition of them, and those who sold and assumed to tell the purchasers how they should use them?—Yes.

676. Do you see any necessity for breaking down that distinction now?—The law preventing people practising as apothecaries has gone practically out of date.

677. That law being still in force, and there being a prescribed examination and a penalty for disobeying it, according to your view, it has no effect practically?—It is not used by the Society of Apothecaries. They have ceased to prosecute.

678. If the existing law were put in force, there would be that clear line and distinction between the person who sold the drugs, leaving the purchaser the entire responsibility of using them, and those who sold drugs assuming to tell the purchaser how he should use them?—Yes. I do not know what the effect of the Medical Act may be on that question. I believe it has preserved the privilege of the Apothecaries Society.

679. Dr. *Brady.*] All the privileges are preserved?—Yes.

680. Mr. *Ayrton.*] Do you see the analogy between the business of a person selling what is used, as in this case, and the duty of a clergyman who is to receive a particular endowment?—Yes.

681. You compared the case, if I understood you, of a chemist with a clergyman?—I said that would be with regard to an examination into their knowledge.

682. In the case of a chemist, he is only to sell the commodity, and the purchaser takes it with his own risk; do you see any analogy in that case and the case of a clergyman being tested for the purpose of accepting an endowment?—If the captain of a ship or an engineer is examined, or if a barrister or a clergyman is examined, before either can become a clergyman, or a barrister, or perform the functions of a captain of a ship, each is obliged to submit to some examination as to what his knowledge is; therefore, I think, applying the analogy, it is quite fair to ask that a chemist who deals in drugs which affect health or life should be examined.

683. A person may profess any religion, and teach it, without undergoing an examination?—Yes.

684. Is not the case of a clergyman that of accepting a particular endowment?—No; speaking generally, there is no sect without an examination as to the ability of its teachers to teach. The most liberal Dissenters require some examination.

685. That is as to the acceptance of some particular views; is there any system, or is he examined with regard to some particular views?—I think that each person is examined as to competence or ability. To that only I refer.

686. Is it a general examination in religion, or is it an examination as to some particular views?—There would be a different examination for different orders, as, for example, surgeons and pharmaceutical chemists.

687. Are they not prohibited, in the Medical Act, from insisting on particular views or opinions of the system of medicine?—No.

688. Allow me to read the clause?—I know the clause perfectly well; it says that the corporations shall not interfere with them, but the Medical Council has nothing practically to do with it.

689. "If it shall appear to the General Council that an attempt has been made by anybody entitled under this Act to grant qualifications, to impose upon any candidate offering himself for examination an obligation to adopt, or refrain from adopting, the practice of any particular theory of medicine or surgery as a test or condition of admitting him to examination:" is not that the express object of an examination of a clergyman?—I think not the only one; he is examined on general doctrines and on his general education: I speak generally of examination as an admission to any office.

690. You desire that those persons who compound drugs, whether dangerous or not, shall be examined as to their knowledge of the use and the qualites of them?—Yes.

691. And at the same time I understand you to say, the person who so sells them must be strictly prohibited from using or applying those drugs for the use or benefit for which they are sold?—I did not say strictly prohibited: they should not be engaged in medical or surgical practice systematically.

692. That would prohibit the person who sells the drug from suggesting the use of it?—A man may know that opium would check diarrhœa, but he does not know what the nature of diarrhœa is, and consequently may not know in what cases to use it.

693. If you require this examination into the knowledge of the use with which the drugs are to be applied, would you not give the man the right of prescribing the use or application of the drug?—He is taught what doses are, but not when to give them, or why; he is taught merely what drugs are.

694. You would keep him strictly within the limits of the mere sale of the drugs, without allowing

allowing him to interfere with the application of them?—He otherwise would be doing what he is really not competent to do: he may be able to prescribe for a sore throat, or to give a dose of aperient medicine, but it would be impossible for him to undertake the treatment of disease, for which, the Committee must admit, that a special education is essential.

695. Have not the medical profession the matter in their own hands, either in directing who is to be the person to make up prescriptions or to make them up themselves?—We have got enough to do in our own department, the treatment of disease.

696. Have you not the power in your hands of preventing the whole evil you desire to remedy?—It could not be done as you suggest.

697. Is it not a very common practice for all classes of medical men to suggest where the prescription is to be made up?—It is the exception, quite. There may be some special circumstances where some special drugs are to be obtained; but it is not the habit, it is the reverse.

698. Is it the practice of surgeons to make up their own prescriptions?—They are endeavouring to get rid of that habit.

699. In the country?—It must be done there, because it is very difficult to find chemists everywhere; but, where it can be done, the practitioner is keeping aloof from the dispenser in his practice.

700. What advantage is there to society in this division of labour?—In the greater improvement in the character and properties of drugs, and in the practitioner charging for visits and not for medicine.

701. With regard to the examination which you desire to be assimilated to medical practice, do you see any inconvenience from its being put entirely under the control of those who carry out the Medical Practitioners Act?—My knowledge of them leads me to say that they would much rather be without it.

702. You have stated you see no objection to the sale of substances which are not dangerous to life?—No.

703. What is the objection to their being sold in a compound form?—The difficulty of framing the distinction is very great.

704. Is there not an obvious distinction in the compounding of those which are not dangerous to life and those which are?—Simples, by being compounded, may become dangerous.

705. Do you think the restriction is sufficient, if it is limited to the compounding and selling, simply, or as compounds, poisonous substances?—I think simples may be sold; but compounding drugs should be by those who know what they are about. It would be for the public good.

706. What would you do with the sale of substances that are in themselves compounds; what is a compound?—I should allow a person to sell compound medicines.

707. Speaking chemically, almost every substance sold is a compound?—Speaking chemically, it is so.

708. Unless you come to elementary matters, everything sold is a compound?—Yes.

709. Supposing drugs were sold wholesale in a still more compound form than they are now, how would you prevent them being retailed in that compound form?—I do not suggest any objection.

710. Would you allow them to buy anything in a compound state?—Not the least objection to that.

711. Would not the effect of this be that the wholesale dealers would sell their mixtures in a compound form, and the law would be evaded?—They could not do that.

712. Are not stamped medicines sold largely?—What we say is, that ignorant persons should not be allowed to compound and dispense medicines; this is a very well-recognised distinction.

713. Are not patent medicines mere compound mixtures?—The retail sellers do not compound them.

714. They buy them?—And they may sell them in their compound state.

715. Would not the effect be to extend the sale of that class of medicines, wholesale or retail?—They must take the consequence of that.

716. Would not a man be able to escape from your legislation for the purpose of simply buying the substances in a compound form, and retailing them?—He could not do it to any extent.

717. Let us come to it; are not nine-tenths of the prescriptions well known and established compounds that might be sold wholesale or retail?—Certainly not; not at all.

718. Are not the doses in the pharmacopœia compounded?—The doses are not given in the pharmacopœia.

719. Not at the end?—No.

720. Are not pharmacopœias published with doses in them?—There are dispensatories and commentaries on pharmacopœias.

721. Are there not in those a considerable number of doses that are such as are usually prescribed by medical men for the ordinary disorders of mankind?—They are.

722. Would not the effect of your legislation be to increase the number of compounds which are now sold, wholesale and retail, and called stamped medicines?—Our object is to prevent harm; and if they sold them compounded in a harmless form they would not hurt anybody. You may possibly extend the trade.

723. You would not object to a man having rhubarb and jalap simply in his shop?—For example, Gregory's powders. I would not let him mix the constituents, but he might sell them compounded or separately.

724. James's powders in the same way?—Yes, certainly.

725. Supposing it came to the sale of jalap and rhubarb, you would allow a chemist to retail them?—Yes.

726. And the same with all other simples?—Yes.

727. What would be the use of having this sort of legislation if it would only lead to that extent?—It would prevent him compounding medicines, and mixing dangerous drugs, of the properties of which he knew nothing.

728. We began with the assumption that they were innocuous drugs?—If you legislate only for what you call not compound drugs.

729. Still you would allow one to sell anything in a shop bought in a compound state?—Yes.

730. Sir *FitzRoy Kelly.*] Do you see any difficulty in the examiners, who have now been employed for a long time by the Pharmaceutical Society, being occasionally sent, if it should be thought necessary, to Liverpool, Manchester, and the other great towns of the kingdom?—Not the least in the world; they ought to be.

731. The

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731. The body of examiners now employed, being competent persons, could as easily proceed to the country as the people to be examined could come up to London?—Quite.

732. Do the Medical Council resort to that mode?—No; because examining bodies exist in various parts of the country.

733. Do you think the public would be undoubtedly protected by merely permitting druggists to write up "registered chemists and druggists" without an examination, or do you think it necessary they should be examined before they should be permitted to compound medicines and dispense medicines?—The *caveat emptor* principle is a good one, that every one should take care of himself; provided that you secured an educated class of pharmaceutical chemists, the public would learn to ascertain who were qualified and who were not.

734. Do you think that would be a sufficient protection?—The public must take care of themselves. The other plan, of all being examined and registered on a minimum examination, would be better.

735. What do you think about it?—I think it would be better to have all registered.

736. Lord *Elcho.*] As regards the Medical Act, that is the only protection the public have between regular and irregular practitioners?—At this moment the Medical Council are before Parliament; or at least before Sir George Grey; they are trying to get a clause compelling all who practise and take titles to be registered.

737. At the present moment it is on the principle of *caveat emptor*?—That is the principle.

738. You think it would be sufficient for the druggist's requirement?—It might be sufficient.

739. There is a further protection in the Medical Act that only certain officers can be placed in gaols, workhouses, and so forth, by being regularly registered practitioners?—Yes; and the recovery of debts.

740. Following out that same principle in the case of making up prescriptions for such places, it might be enacted, might it not, that none but regular chemists and druggists should make up prescriptions for public places?—Yes; and they should not recover for medicines supplied except they were registered.

741. Sir *FitzRoy Kelly.*] You would add registration?—Yes.

742. Mr. *Roebuck.*] You used the words chemist and druggist; will you tell me what a chemist is?—You ought to ask a chemist what a chemist is. There are two classes of chemists, purely scientific chemists, such as the professors at the Royal Institutions and the teachers at schools, and the pharmaceutical chemists, who mix drugs.

743. And a druggist is a person who sells drugs?—Yes.

744. I think you laid it down as a rule, that one of the dangers arises from persons not knowing the meaning of prescriptions, and therefore one of the conclusions to which you come was, that no person not examined should compound medicines?—Yes; who had not shown knowledge or capability.

745. I want to know what a prescription is?—A prescription is an order for the preparation or compounding of drugs.

746. Will you take that in your hand; is that a prescription (*handing a paper to the Witness*)?—Certainly.

747. Is that a prescription (*handing another paper to the Witness*)?—That is very incomplete.

748. One I wrote, the other was written by a doctor: mischief arises from accident; careless accident, ignorance, carelessness, and criminal intent; that exhausts all cases of danger?—Yes.

749. In order to prevent accident and ignorance, would it not be a good precaution that the thing should be written in English?—The patient would not take it in nine cases out of ten if he knew what it was.

750. Do you know in France all prescriptions are written in French?—It is often illegible French; and, moreover, the thing prescribed does but little good or harm.

751. Is that your opinion of French physicians?—From experience, I can say, that the French generally prescribe what does very little good, and certainly does very little harm.

752. And you think a great advantage is derived from keeping the patient in ignorance of what he takes?—Immense advantage.

753. That is your reason for not taking the precaution of preventing accident that arises from the ignorance of chemists of writing in English?—Yes; and, further, the facility of getting dispensed abroad prescriptions written in Latin.

754. And you would rather run the risk of the ignorance of chemists than the obstinacy of the patient?—Not the obstinacy.

755. Now I think you answered Lord Elcho that *caveat emptor* is a good principle?—It is one for which I am an advocate.

756 Is it a sufficient principle?—I do not think it is. Ignorant and careless as the people are——

757. *Caveat emptor* is just the very case in which the buyer might take the chance of his buying from an ignorant person?—I was saying that the people are so ignorant and so careless that unless precautions are taken to protect them they fall into difficulties.

758. What do you mean by *caveat emptor*?—A person might go to a quack when he might have good advice from an educated person, but he must do it at his own choice and risk.

759. You would allow me to do that?—Yes.

760. And the quack to practice and sell?—Yes.

761. Does not that go to the whole extent of preventing legislation altogether?—Adopting Lord Elcho's proposal, you will have the chemist and druggist registered, and the pharmaceutical chemist, and the person who calls himself a druggist; you provide the public with educated people, and leave them to do the rest for themselves.

762. And when you take the precaution that none but an examined person shall use a certain name, you have taken all the precautions that you can find?—Except you go a step further, and say no one shall be a chemist and druggist unless he be examined.

763. You are prepared to say that?—If you make the minor examination very low, and registration easily accessible, I should be prepared to go to that extent.

764. You do not follow out the principle of *caveat emptor*?—I should prefer it myself, but there are those who do not; I think it is, therefore, worth consideration whether, if you would allow the examination to be so simple and easy that no one should have an excuse, you would not succeed in obtaining registration for all.

765. And

765. And all the world will pass it?—So moderate that there would be no difficulty in passing an examination. It would be so easy that no one would have a justification for saying that he was unable to register.

766. There is the force of your expression; "no one" means all the world?—Nobody brought up to the trade of a chemist or druggist.

767. A man goes in to any chemist shop and tells him I have got a headache, will you give me a dose for it; will you allow him to give me a dose?—Certainly.

768. Supposing I went on a Monday?—If you went every day for the same disease, I think the chemist should be prevented from treating you.

769. Supposing I went on Tuesday with the same headache, would you allow me then?—If you did, I would not interfere.

770. And if I went on Wednesday, would you then prohibit me?—Yes; I should say the chemist was systematically acting as a practitioner.

771. Three days act "systematically?"—We shall say so.

772. Two do not?—That would be a medium.

773. Do you think legislation could act on that sort of language?—Judges, or those before whom these cases come, would say what "practising" meant; judges interpret the law.

774. They make the law very often?—My suggestion was this, that chemists and druggists should not be allowed to be engaged in the treatment of diseases systematically; it is for a judge or magistrate to say what systematically is.

775. I want to know what is the meaning of the word "systematically;" I am talking as a legislator, you are talking as a physician; I want to know the meaning of the word systematically?—The public going day after day to be prescribed for, or the chemist going out to visit and prescribe for them.

776. The chemist going out and seeing them is so obvious a thing, you can put your finger on it; how can you prevent a person coming day by day or once a week to get advice for medicine from a chemist?—Probably you could not prevent it. I should put it with regard to any prosecution that it should be conducted by the Central Council, and unless they got satisfactory evidence, they would not sanction such a prosecution.

777. Supposing in a village there was a Lady Bountiful, and she went round to her cottagers generally once a day, and to the little ones that had got a cold she administered a certain dose, and to the women also who had colds a certain dose, and to the husband who hurt his foot just enough to do something for them, would you punish her?—She is not a chemist and druggist.

778. I am talking of a person without knowledge?—No law could punish that except it caused fatal or ill effects.

779. She takes in her pocket a dose of rhubarb, nobody thinks of interfering with that; what is the difference between the chemist and the lady who gives a dose?—I am adopting the words of the report.

780. I am not asking you what you adopt, but why?—Because the chemist and druggist keeps a "doctor's shop," which is a temptation to people to go to him, because they believe he has a sufficient knowledge to treat their diseases, and he is more in their way than Lady Bountiful. He is in a position to a certain extent not only to impose himself upon the public, but to let the public impose upon themselves. There are thousands of instances where injury has been done to the public through the chemist going on from day to day treating serious diseases, till such diseases become much worse and more established.

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781. One objection to the chemist is, he is likely to do great service to the patient?—Great harm.

782. The patient thinks he is likely to do great service?—That is in ignorance.

783. Is it not in your knowledge that people go to a druggist labouring under a disease, and, by continuing under the attendance of this man, that the disease makes such a progress that it is difficult to distinguish it?—Yes.

784. Have you ever known such things happen under the regular profession?—It is so sometimes.

785. I want you to tell me whether you would have a schedule of dangerous drugs or poisons, and you would say persons who sold those drugs should undergo examination, but all other matters they should sell?—Yes.

786. What number of articles do you think, guessing roughly at it, would go in this schedule of dangerous drugs?—Thirty or forty, or less if you give radicals; for example, belladonna and its preparations, opium and its preparations, and so on. Twenty articles would then perhaps answer the purpose.

787. So that at a general shop in the country, where the man had castor oil, senna, rhubarb, and salts, and things of that description, you would allow him to sell them?—Quite so.

788. Supposing that were sent him, would you allow him to make that up (*handing a paper to the Witness*)?—No; I would let him supply the articles, but not make it up.

789. If Mrs. Jones sent down her servant for an ounce of salts and ten grains of rhubarb, you would allow the man to sell the ounce of salts and the 10 grains of rhubarb to the child?—Yes, quite so.

790. But if the doctor comes in and writes it down on a piece of paper, you would not allow him?—Yes; why not?

791. Where is the difference?—He is not to compound medicines.

792. He may sell them in different papers under that prescription?—Quite so.

793. It is not selling them under a prescription, but putting them together?—It is the compounding and dispensing I want to exclude. It is a very comprehensive phrase.

794. What is the meaning of the word "dispense?"—"Dispense" means, compounding or mixing, putting in a bottle, and labelling and directing, &c.

795. Do you dispense medicine without compounding?—I assume not.

796. If a doctor chooses to write this prescription in English, and says, Put them in separate papers, you will not allow me to do that?—Certainly.

797. Putting aside that danger you suggested of the patient knowing what was taken, do you not think there would be some protection for the public if prescriptions were written in English?—I do not the least in the world.

798. No check upon your own profession?—Not the least in the world. The amount of Latin that is required for writing prescriptions is so very small, it can be easily acquired.

799. I suppose there are not 50 per cent. of the

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the medical men who could write them if you required the terminations?—I will not say that.

800. Mr. *Ayrton.*] Would you allow the alkali and the acid to be sold in two powders, but not allow a person to mix them in the shop, and not allow another person to take them?—Yes, anyone may go in and mix them in the shop. If you make a law that ignorant persons are not to compound and dispense you must let it apply generally.

801. Sir *FitzRoy Kelly.*] There would be no harm with this clause in: if you gave a general power, it would include all prescriptions?—Yes.

802. Mr. *Roebuck.*] Although you have so low an opinion of French physicians, you know all prescriptions are written in French?—They are, and it is a great disadvantage; and would be still more so if they prescribed anything the patients would care about taking.

803. Mr. *Charles Forster.*] Do you think it would lower the character of the medical profession if prescriptions were written in English?—I am sure people would not take remedies.

804. Mr. *Roebuck.*] You just now mentioned in your evidence that so many cases of harm and mischief arise; are you aware of harm and mischief having arisen from persons dispensing medicines who were not competent to dispense them?—Yes, I have known a good many instances; but I have said, that I am unable to say whether it arose from ignorance or from carelessness.

805. Are there not great precautions taken in Ireland to prevent anybody practising as a chemist and druggist who has not gone under an examination?—No. They are prevented from practising as apothecaries, that is making up prescriptions; they can act as chemists and druggists.

806. There is exactly the same danger in Ireland as here?—Nobody can act as a physician's dispenser of prescriptions in Ireland except a member of the Apothecaries Society.

807. You mentioned a case?—That was of a pupil who had passed only the preliminary examination.

808. Mr. *Ayrton.*] That was a case of mistake?—It was hard to say which it was.

809. Mr. *Roebuck.*] That was a case which happened under the very system which you speak of; a person undergoing an examination?—He had not undergone a professional examination; he was an articled pupil, and so far ignorant of drugs.

810. He served a person?—Yes.

811. Could you lay down any law to say a man should not have in his shop any person but a person who had undergone an examination?—An assistant ought to undergo a professional examination, and a pupil should be watched with extreme care.

812. Sir *John Shelley.*] You alluded, I think, to a case of poisoning some time back; and you said, in that case, the person who had done it was not a pharmaceutical chemist?—No, he was not.

813. Are you aware of that serious case at Liverpool, Abrahams' case?—Yes, I am.

814. Was Abrahams a pharmaceutical chemist?—I have heard it said he was.

815. That being so, as far as the present system goes, it does not prevent an accident of that sort occurring?—It may be carelessness and not ignorance.

816. How do arrive at that?—Because I am sure that no one would have given a dose of strychnia if he thought about it for an instant, and a pharmaceutical chemist must know what the dose of that remedy would be.

817. I think I understood you to say, if you had a prescription to be made up you would almost insist on its being taken to a pharmaceutical chemist?—I did not say that; I said, if there were two chemists unknown to me, and a person consulted me as to which of the two I should send a prescription, if I knew one to be a pharmaceutical chemist and the other not, I should say, "Take it to the pharmaceutical chemist."

818. Supposing you to say that you would not be sure the pharmaceutical chemist had gone through an examination?—The vast majority of them have gone through an examination.

819. Are you aware about 600 out of the 2,000 have been examined?—I cannot say; I should be disposed to say, a man who joined the Pharmaceutical Society, and took the trouble to subscribe to its funds, was a better class of man than he who did not: I confess that would be my impression.

820. Mr. *Roebuck.*] Do you assume that because he paid?—No; because he seemed to take a greater interest in the science.

821. Sir *John Shelley.*] Do you know there were some gentlemen who joined the Pharmaceutical Society and afterwards receded from it?—I do not know enough of it. I read that statement in one of the papers I got in common with other people. I do not know anything of my own knowledge.

822. Are you aware, in the "Pharmaceutical Journal," monthly, a notice appears, in which it states that persons having seceded from the society can be restored to their former status on payment of arrears of subscription and the registration fee for the current year?—I think I have seen such a statement.

823. That presumes that every person, by paying a certain sum to that Pharmaceutical Society, may become a pharmaceutical chemist, and put that over his door; do you see any security to the public from any knowledge on the part of those persons?—I presume that being originally members, some security was obtained as to their knowledge and character.

824. Are you not aware that at the time the Pharmaceutical Society was established, all persons then carrying on the business and trade of a chemist and druggist had the right to become a member of the society?—I believe it was so.

825. When you say you would send your prescription to a pharmaceutical chemist in preference, as things now exist, you have no security, have you, that persons formerly subscribing are to come in again without examination?—I would have greater security than from one who had no such claim at all. I would take my chance of his having been examined.

826. Although 600 only out of 2,000 have been examined?—I would take that chance

827. May I ask, whether I am correct in believing you to say that, amongst persons not members of the Pharmaceutical Society there are persons quite as competent to carry on the trade?—If I were asked to whom I would send a prescription to be made up, one who had written up "pharmaceutical chemist," and the other "chemist and druggist," I should say you will probably find the pharmaceutical chemist better.

828. You would not think it necessary, not so important; but you would say, "If you have got a pharmaceutical

a pharmaceutical chemist; whatever you do, take it to him?"—It would be a wrong interference on my part to do so, and I should not do it.

829. Lord *Elcho.*] With reference to the chemists and druggists prescribing, you said either a Medical Bill is to be introduced this Session or is in contemplation; is it to be introduced this Session?—That depends upon Sir George Grey; the matter is in his hands.

830. In the former Medical Bill there were some questions with regard to preventing prescribing by chemists and druggists?—I do not know enough of that.

831. The protection of the public in that Bill was the prevention of the treatment of disease by chemists; that is on the *caveat emptor* principle?—Quite so.

832. Are you aware, in this Bill which is in contemplation, it is intended to lay down a law that no chemist is to prescribe?—That is a mistake; the principle of the proposed 40th clause is this, that no one shall take a title and practise except he is registered.

833. It does not propose to touch this question of prescribing?—Anybody may prescribe, but they must not take recognised titles; the present clause says he shall not pretend to be so and so; it is impossible to prove a pretence: the proposed clause says, he shall not take a title and practise unless he is registered.

834. Mr. *Ayrton.*] Do you see any practical objection to applying to chemists and druggists the principle of the Medical Practitioners Act, which does not interfere with the existing system, but merely establishes a new council for the purpose of registration, leaving all societies to their independent action?—I do not quite understand you.

835. With reference to the present Medical Practitioners Act, which established a council for the purpose of registration, it did not interfere with the existing professional societies; do you see any particular objection to applying that principle to the chemists and druggists?—The Medical Act is quite different; it did interfere materially, and controlled all examining bodies; the Medical Council is to superintend education.

836. All the existing societies are left to carry on their duties?—Quite so; the Medical Council is to superintend and regulate medical education, and to register duly qualified practitioners.

837. The Medical Council has only power, if it thinks the standard of education insufficient, to bring them up before the Privy Council, and make a complaint?—Yes.

838. And therefore the principle of the Act is to leave all systems intact, and to establish a council for the purpose of registration?—Yes.

839. Do you see any objection to applying the principle of that Act to chemists and druggists?—It would be crushing a mouse with a Nasmyth hammer to appoint a council merely to register chemists and druggists.

840. Do you see any objection to appoint a council, for the purpose of superintending the registration, leaving the societies to their own condition?—A registrar would suffice.

841. Are there no existing societies?—No.

842. We are told that there is a society in Ireland?—That is the Apothecaries Society.

843. Did I not understand you there was a restriction on the making-up of prescriptions?—Limited to apothecaries.

844. In Ireland there is a society which regulates the persons who make up medical prescriptions?—Yes.

845. In England there is a society called the Pharmaceutical Chemists, and another called the United Society of Chemists and Druggists; having regard to the fact there are three societies existing, do you see any practical objection to a body being established for the purpose of a general superintendence of registration, the same as is provided by the Medical Practitioners Act?—We may dismiss the Irish Society at once. They are registered under the Medical Council, and we have here nothing to do with them. The Society of Chemists and Drugggts do not examine; and it would be a serious and a wrong thing to establish another and a new examining body. If you establish an examining Board, suppress the old one.

846. If these functions are already performed by the Council of Medical Practitioners, under the Act of 1858, in regard to Ireland, what is the objection to their being performed with regard to England?—There is a wide difference between the Irish apothecaries and the English chemists and druggists.

847. What is the difference?—One prescribes as well as compounds, and is virtually a medical practitioner. They are not on the same principle. In Ireland, by some strange anomaly, the chemists and druggists cannot make up prescriptions, the restrictiion is to act merely as a druggist. The right to compound prescriptions is limited to members of the Apothecaries Society; whereas, in England, the chemists and druggists have the privilege. The Irish apothecary is something above the chemist and druggist.

848. In Ireland both the functions of the apothecary are prohibited to all persons except surgeon-apothecaries?—Quite so.

849. Whereas, here, only one function is confined to certain people; that is to say, the function of regulating the manner in which the drugs are to be used?—In Ireland the apothecaries alone are permitted to compound and dispense.

850. Mr. *Roebuck.*] If he make a mistake is there any mode of punishing him?—The law will apply to him.

851. It is simply the action of law which exists in England about negligence?—The same exactly.

852. And in the case you mentioned of the mistake in the henbane, did you take any steps to punish the man?—There were no steps taken. Many such cases occur yearly in London.

853. I beg you to confine your attention to Ireland; I want to know whether you took any steps to punish this man for the gross negligence for allowing such a person to make up a prescription?—It never extended beyond their own knowledge.

854. Where is the good of these precautions?—You seek to prevent the evil by education.

855. Here the evil happened after the education?—He had been examined merely. He was but a pupil in classics.

856. In that case you did not prevent mischief; how would your precautions prevent the same thing?—That remark will apply to all crimes; where then would be the use of any education?

857. Mr. *Ayrton.*] If the Irish law were applied to England, all chemists and druggists would be prohibited from making prescriptions unless they were surgeon-apothecaries?—Yes.

858. Lord *Elcho.*] To revert to a point Mr.

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Ayrton has asked you about, whether you do not think the analogy of the Medical Act might not be applied to legislation with regard to chemists and druggists, that you should take all existing bodies and regulate their examinations by a commission or a council; practically, as regards England, is there any analogy between the two cases?—There is but one society in England engaged in these examinations.

859. In the Medical Act there were various bodies, each of which granted degrees, amongst others the Archbishop of Canterbury?—Quite right.

860. There were different standards of examinations, and there was a council to regulate the standard?—Yes.

861. And the different degrees were recognised and scheduled, with the exception of the Archbishop of Canterbury's; that was struck out?—Yes.

862. As regards establishing an analogy, we have to deal with the fact that in England you have only one examining body that professes to educate, that is the Pharmaceutical Society?—Quite so.

863. Therefore there is no analogy, as suggested by Mr. Ayrton?—No.

864. And as far as education goes and raising the standard of the chemists and druggists, you have no control over the chemists and druggists?—None.

865. Mr. *Ayrton.*] Is not the analogy involved in this; you do not by Act of Parliament give to one society the right of dominating over the whole of the trade of the country?—I am conscious of that difficulty; and it was that consciousness which led me to say that the proceedings should be controlled by the Home Secretary or the Privy Council; I felt there was a great difficulty in the matter.

866. Is not that difficulty obviated by the Medical Practitioners Act not allowing one society to have the right of control over the whole of the profession of chemists and druggists?—As Lord Elcho pointed out, we have not 19 or 20 examining bodies. Here you have but one.

867. You propose to take as your basis of legislation a society which you find in operation, whose operations you are aware are known to have been successful, and you propose to liberalise that society, and to control it, so that it should not have a monopoly?—Quite so.

868. Sir *John Shelley.*] Lord Elcho has examined you as to your knowledge of the limited society, now, you have read two Bills, and Bill No. 2 is the limited society's Bill; are you aware that is a Bill promoted, not by the limited society, but by the chemists and druggists of England not members of the Pharmaceutical Society?—I cannot speak of my own knowledge as to that.

869. Now, you were asked a question as to the United Society having lecture halls, museums, and being an examining body; are you aware that there are several members of the Pharmaceutical Society who are members of the United Society?—I am not sufficiently acquainted with the facts.

870. As regards those two Bills, am I right in saying that this Bill No. 1 is promoted by the Pharmaceutical Society, in which they ask for legislation, whereby they might be appointed the examining body over all the chemists and druggists of England; is not that so?—Quite so.

871. And registration fees should be paid to that society by all persons wishing to be chemists and druggists; do not you think, if the outsiders are to come in as examined by the Pharmaceutical Society, they have a right to register themselves as having been examined, and as pharmaceutical chemists: I say nothing about rights of membership or anything of that sort; I ask you, looking at the interests of the public, do you see any objection to the outsiders having been examined by the Pharmaceutical Society and having a register of them, being pharmaceutical chemists?—Not the least in the world.

872. What I ask is this (I am now looking to the interest of the public): do you see any objection, and, in fact, is it not fair and right that chemists, outsiders, coming in, and being examined and registered by the Pharmaceutical Society should then be allowed to call themselves pharmaceutical chemists?—If a man passed the major examination.

873. The question is an application by the Pharmaceutical Society to force all chemists and druggists to come up and be registered by them?—As chemists and druggists, I presume.

874. At the same time all the pharmaceutical chemists should be registered also?—At the same time all the pharmaceutical chemists should be registered also.

875. For the minor examination?—For the major.

876. Looking at the interests of the public, do you see any objection to all persons, whether members of the Pharmaceutical Society or persons registered for the minor examination, being put on the same footing?—I think it would be a great advantage to inaugurate a higher class of examination by having a higher standard.

877. You agree with those who say you must reserve a higher examination and a higher qualification as an object of ambition to the chemist and druggist, rather than with those who wish to go beyond the mere trading in these articles?—I think so. It is the same in all institutions of the like kind.

878. I ask you, looking at the interests of the public, setting aside all questions of membership and distinction, the advantage of living in London, and attending the lectures, and so on, the mere minor examination of all chemists or pharmaceutical chemists, or others, do you think that they should come in and be put on an equal footing in regard to the examination?—All who have to pass should pass the minor examination.

879. And be equally all members of the Pharmaceutical Society?—They should not be allowed to be members of the Pharmaceutical Society except they passed one or other of the examinations.

880. I want to know this: members of the Pharmaceutical Society, as well as those who are outsiders, not members of the Pharmaceutical Society, should all come and be registered equally in those minor examinations?—They would not have to pass it if they have passed it already. A person who had passed no examination would have to give some evidence of his capacity.

881. Mr. *Roebuck.*] As to existing members?—No.

882. Do you know the difference between a member of the Pharmaceutical Society and an outsider now?—A great number of the former have passed a difficult examination, and have thus obtained their designation.

883. Has

883. Has every member of the Pharmaceutical Society been examined?—It is admitted not.

884. I want to know (speaking entirely of persons in the future), when a man would now come up according to your proposed plans, and be examined under the minor examination, what would be the difference in his position from that of a member of the Pharmaceutical Society who has only undergone the minor examination?—None whatever; he would be on the same footing.

885. Is there any difference in the one and the other calling himself a pharmaceutical chemist?—No member of the Pharmaceutical Society is allowed to call himself a pharmaceutical chemist, if I understand it rightly, until he has passed the major examination.

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886. Dr. *Brady.*] Have you found any inconvenience arising from the system pursued in Ireland with regard to licensing apothecaries?—None whatever.

887. The system works well?—There has been no difficulty about it.

888. Mr. *Roebuck.*] My question was, whether the same danger did not exist now in Ireland as exists in England?—It is the same everywhere.

Dr. James Arthur Wilson, called in; and Examined.

889. Sir *FitzRoy Kelly.*] I BELIEVE you were formerly a Physician and Lecturer in various branches of medical science at St. George's Hospital?—Yes.

890. You have had very long experience in medical and chemical matters and subjects?—Forty-five years. In medical rather than in chemical matters.

891. Will you let me ask you whether, in your judgment, the public require some protection by legislation against the incompetence and ignorance of chemists and druggists?—In my opinion, yes.

892. Do you think that a protection to the public may be secured by subjecting chemists and druggists hereafter to an examination?—I think the protection should be more than it is at present. There would be no absolute protection against accidents; but, answering generally, yes.

893. Do you think it is necessary or fit to legislate on the subject, so far as to subject all future chemists and druggists to an examination before he shall be permitted, as a chemist and druggist, to compound medicines?—Yes.

894. Are you aware of the kind of examination which is administered to chemists and druggists by the Pharmaceutical Society?—I have not attended the examinations, but I am aware of their general character.

895. Do you think it is sufficient for the purpose?—I have in my hand the programme of the two examinations, the minor and the major. I have made one or two pencil notes. I do not think the minor examination, in one or two respects, quite sufficient for the purpose.

896. When you say, "in your view for the purpose," for what purpose; you have considered the minor examination, to which alone I will solicit your attention; you think that minor examination, in one or two particulars, is not sufficient for what purpose?—For the purpose of protecting the public as far as possible against mistakes in compounding medicines, and in the general business of the shop.

897. What are those one or two particulars?—The only decided remark I should make is this: it is more an omission than a fault of the examination. In the minor examination, under the head of "prescription," I would have introduced the clauses No. 2 and No. 3 of the corresponding division in the major examination, *i. e.*, "Detecting unusual doses," and "knowledge of doses generally."

898. You would extend the minor examination in the detection of doses?—Yes, in the knowledge of doses generally.

899. With that kind of emendation, do you think the minor examination sufficient for the purpose you have mentioned?—Yes, I do.

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900. Now, let me ask you, do you think it more than sufficient, too stringent or calculated in any way to interfere with the freedom of trade, the liberty that every man ought to enjoy to carry on his trade without restriction, as far as it is consistent with the public safety?—I do not think so.

901. And you do not think it too stringent or too severe?—I do not.

902. Are you aware of any other board or body of examiners in existence to whom you would commit the task of examining persons as to their qualification for chemists and druggists, except the Pharmaceutical Society?—I am not aware of any board.

903. Have you visited the premises of the Pharmaceutical Society?—Yes, I have.

904. Have you seen the general nature of the institution?—Yes, I have.

905. Do you think, from your observations, and founded on your experience, they are a perfectly competent body or board to superintend this examination for the whole trade of chemists and druggists in the kingdom?—Remarkably competent; more than the public had any right to expect, I should say. The development of the society has surprised me.

906. You are aware they have had experience in this examination for a very great number of years?—Twenty-five years.

907. Do you entertain the same opinion, or have you formed any opinion, as to the expediency of protecting the public against incompetent or ignorant chemists and druggists, in relation to the sale of poisons and poisonous drugs?—I have thought a great deal on that subject at various times, and have heard a great deal, but, practically, I still find it full of difficulty. It seems to me it is a matter for police and Government legislation, and that it should be considered in a separate form. I would hardly wish to engraft it on a Bill of this kind. I think it is so serious and so difficult, that it would deserve another Committee, another debate, another Bill.

908. Turning back to the examination and the examiners of the Pharmaceutical Society, do you think there would be any difficulty whatever in their delegating certain numbers of their examiners to proceed from time to time, as often as occasion should require, to Liverpool, Manchester, Hull, and other great towns in England, and occasionally to other places in England and Scotland, for the purpose of administering this

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examination to persons about to become chemists and druggists?—Speaking as an "outsider" (the term has been used), I see no difficulty. It would be a matter for their internal arrangements. The council would be the best judges as to whether they could spare the time, and whether they could organise the travelling arrangements. I should say it is a good suggestion.

909. Now look at the constitution and the experience of the Privy Council, do you think it would take a considerable time to form and establish and bring into practice any other body possessing the like facilities of conducting this examination?—A great length of time to organise any other body, and a much greater length of time to get the confidence of the medical profession and the public, which the Pharmaceutical Society have long ago secured.

910. Lord *Elcho.*] You heard the question that was put to, and the evidence given by, Dr. Quain; should you think, looking at all the circumstances of the case, that would be on the whole a satisfactory solution of the question to legislature on the *caveat emptor* principle; I mean examination and registration, and that the public go to the registered shop or the unregistered shop at their peril?—My own notion would be (having heard a good deal of what has gone on), that, in regard to the admission of chemists, not hitherto registered, into the society, I would not admit them quite so easily as proposed in clauses 4 and 5 of the Bill, No. 1. There should be more assurance of the "outsiders" being competent for the business of compounding drugs and so on. Once approved as to a sufficient degree of fitness, I would advise that they should all be registered as "pharmaceutical chemists." I would moreover suggest, that the designation over the shop of all such approved persons should be "Registered Pharmaceutical Chemist;" and more than that, I would recommend that it should be compulsory on all other chemists and druggists keeping open shop to designate themselves as "Chemists and Druggists, unregistered." I think the public should be made aware of the difference. I would then assent to the *caveat emptor* principle, and should thus hope to impress on the public a little more regard for themselves, and a little more respect for medicine and the persons employed in it.

911. If you had two degrees, a major and a minor examination, perhaps the best distinction would be that the major degree should be indicated by, "Pharmaceutical Chemists, registered," the minor degree by, "Chemists and Druggists, registered," and those who deal in drugs should have "Druggist" only?—The term "Pharmaceutical Chemist," in its conventional sense, as employed in this Bill, is not recognised by the general public. It is a Parliamentary phrase of 13 years' standing, but it means nothing more than a chemist or druggist who has to do with pharmacy. It is an arbitrary term; and, when chemists are once registered, I would allow them to be called, "Pharmaceutical Chemists," just because they are pharmaceutical chemists.

912. Sir *John Shelley.*] In the evidence you have given, do you agree with Dr. Quain as to the dangerous drugs, or do you agree with those who sell drugs you do not call dangerous?—As I have already said, the question is one of so much importance that I would not answer it off hand; it might be simple drugs or dangerous drugs. A man was poisoned the other day by two ounces of Epsom salts. There was an inquest; and in another case from an ounce of nitre. In November of last year, a case was reported in which very severe symptoms were induced by an ounce of tincture of arnica (leopard's bone), kept at hand as an embrocation for bruises, and swallowed by mistake. With regard to the grocer, of whom we have heard so much, I should deter him from meddling with physic at all. I think that there would be a great gain to the public, of security and convenience, directly it was known there were registered depôts in all parts of the kingdom. If the village general dealer were allowed to sell Epsom salts, or senna, or rhubarb, I think there should be a precaution of some kind. He would get his drugs at the trade price; he would get them at the registered chemist of the country town, and I think there might be some little check, by inquiry and carefulness in the entries of such sales. The Council of the Parmaceutical Society might exercise some right of supervision here. Precautions should, as far as possible, be taken, and I think there might be a sort of *index expurgatorius* of certain things that should never come into his possession. It would not only be the grocer or the grocer's boy, but the maidservant and the cook. There is no limit to the danger. I think the public ought to take some care of themselves. Why should they not have, in an out-of-the-way place, a medicine chest? Why should not the country gentleman or clergyman have common drugs in moderate store, with Squire's "Companion to the Pharmacopœia," or John Savory's "Compendium of Domestic Medicine," for regulation of weight and measure?

913. Mr. *Roebuck.*] He might kill himself?—He would have a much less chance of killing himself than by going to the grocer's.

914. Sir *John Shelley.*] Do you not think it would require a considerable amount of bravery for a man to have a medicine chest, and dole out physic?—I should think it would be a much braver thing to go to a general village shop where he might get the wrong thing in wrong quantity.

915. Do you go as far as Dr. Quain; he would throw every difficulty he could in the way of a person, in an out-of-the-way place, being able to procure for himself what is absolutely necessary; I mean poison, for killing rats, and so on: would you go as far as he would, and throw every difficulty in the way of that being obtained easily?—I would give no facilities. Rat poison is human poison. Battle's vermin powder and Simpson's vermin powder are as deadly poisons as can be taken. Only last month a young woman took two packets of Simpson's vermin powder and one of Battle's. Simpson's powder is arsenic; Battle's is strychnia. The woman died in convulsions. No strychnia was found in her body after death; it had not been fairly swallowed. Arsenic was everywhere in the blood and structure.

916. Then, from the fact of there being some ignorant persons, farmers are to submit to loss of property?—I do not admit loss of property; they would go to the market town, and the landlords, if they craved for rat poison, would soon make their way to the place where they could get it. With railways, spare horses, grooms, and pony chaises, it would not be difficult.

917. You do not think there would be any practical difficulty to the public at large by saying no person shall sell rank poison without having

having been previously examined?—I would not say in every case examined.

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918. But registered?—Such a law would tell against the patent medicines in every way.

919. I want to put the question distinctly; do you say you think it is of such importance to the public, the risk of life, that you would put every person to the difficulty of obtaining that which they require, rank poisons, than that persons should sell it as they do now?—Quite so.

920. Dr. *Brady.*] Are you of opinion that the present state of things is insufficient for the preservation of life, and that legislation is necessary?—I think it necessary.

921. Mr. *Charles Wynn.*] Could you devise any plan for restricting the sale of patent medicines; some are poisonous, I believe?—Yes, most of them are poisonous in over-frequent or extravagant doses; Morison's pills, for instance, many a good man has died from Morison's pills.

922. Opiates, Dolby's carminative, and Godfrey's cordial?—Yes; they are poisons, every one of them, when taken in excess.

923. You do not think it would be possible to impose any restriction on the sale of them?—I have not thought largely on the subject; it would be matter for the Government a good deal, in its fiscal arrangements. It is a question that involves the revenue.

924. They are sold rather more by stationers, in general shops, than by chemists, are they not?—There are certain large shops in London where they are sold specially and exclusively. There are two or three shops of that kind for patent medicines.

925. Which are not chemists' shops?—Which are not chemists' shops.

Mr. John Mackay, called in; and Examined.

926. I BELIEVE you are a Chemist carrying on your business at Edinburgh?—I am.

Mr. *J. Mackay.*

927. And I think you were one of the founders and original members of the Pharmaceutical Society?—I was.

928. And have acted as honorary Secretary to that society in Edinburgh?—Ever since.

929. That is for 25 years or thereabouts?—Yes.

930. Now let me ask you, in the first place, are you of opinion, after your long experience, and being a chemist and druggist yourself, that the public safety requires that some protection should be afforded to the public against the ignorance and incompetence of chemists, and by means of some examination?—I am.

931. You are, of course, perfectly well acquainted, in all its details, with the minor examination (I will not trouble you with any question about the major examination at present), administered by the Pharmaceutical Society?—Thoroughly.

932. I presume, as a chemist of the higher order, you are a pharmaceutical chemist?—Yes.

933. In your judgment, is that examination sufficient to protect the public against the danger now arising from ignorance and incompetence in chemists and druggists?—I consider it quite sufficient.

934. Do you consider it necessary, and at the same time sufficient, with respect to the compounding of medicine and the making up of prescriptions?—Yes, I do. Perhaps you would allow me to state what is the usual manner of conducting the examination in Edinburgh. I may say, that we consider ourselves part of the Pharmaceutical Society of Great Britain. We do not consider ourselves to be a branch, in one sense, because, by the Pharmacy Act of 1852, we have a council similar to the one in London, and a special board of examiners, both of which are annually elected. We follow as nearly as we can, in our examination, the course followed by the board of examiners in London. With reference to the minor examination, when candidates appear before the board, they are examined first in the reading of prescriptions. By this we mean that candidates shall begin and read, giving the full Latin terminations: the various ingredients, as well as the quantities contained in these prescriptions. The examiners have several prescriptions in which poisonous doses are mentioned, and the candidates are expected to detect these and indicate whether they are practically correct, and, if not, point out the errors. Then we proceed to *materia medica.* Drugs are placed before the candidates for recognition and history, as well as to consider whether they are in a good sound condition. We pass then on to pharmacy, and take the preparations contained in the pharmacopœia. Upon these we question very fully, both as to their composition, uses, and doses. That being finished, we go on to chemistry. We do not go very deeply into the abstract science, but we ask as to the various actions occurring in the mixtures of the different substances. We touch on atomic theory and the various combinations in medicine, and we finish by asking a moderate acquaintance with medical botany, certain medical plants, and to name their various preparations and doses. If the candidates are sufficiently well acquainted with those departments they are passed. That is generally the course of the minor examination.

935. And has that, during the whole period the society has existed, and as far as your experience extends, been found practically sufficient and successful?—Quite. Of course, I refer specially to the time when the Pharmacy Bill became law, and I may also refer to this peculiarity, that we try as much as possible to get young lads to undergo the classical examination which is preliminary to the minor; the examination thus referred to may be undergone during the first or second year of apprenticeship. By such means pupils are connected with the Pharmaceutical Society, and better prepared to present themselves for the minor examination in the course of a few years afterwards.

936. As you carry on business yourself, you can tell us probably better than the other witnesses; in your judgment, would this kind of examination, as applied to chemists and druggists before they should be permitted to make up prescriptions, and compound medicines, be of too severe or stringent a character so as in any way to interfere needlessly with the freedom of trade and commerce?—I do not think so. I may mention, our board is the same as in London, they admit the candidate by number. The examiner takes the candidates and examines in a certain branch; he then puts down certain numbers referring

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ferring to the qualifications of A. B.; these are summed up, and we have found (I am speaking from what has been actually found), when some have been perfect in prescriptions and prescription reading, materia, and pharmacy, they may not be perfect in chemistry, but taking one with the other, they are quite in a position to be trusted with prescriptions.

937. From your having a board of examiners in Edinburgh, I need hardly ask you, would there be any difficulty supposing we allow some such examination to be administered to all persons about to become chemists and druggists in future, in appointing or delegating certain numbers of those examiners to proceed to Liverpool and other large populous places, so as to relieve the people about to become chemists and druggists from the necessity of coming to London?—With a view to increase the number of our society, I have long thought it would be a desirable thing to establish local boards.

938. In the largest and most populous towns in England and Scotland?—Precisely. But I would specially draw attention to this fact. As the examining board in London has had much experience, two members could go down on certain days to different towns in England; and, in the same way, we could send two members from our Edinburgh Board, as examiners, to appear at Glasgow, or Aberdeen, or Newcastle.

939. Who is to appoint the examiners?—The council appoint the examiners. The names of those proposed for the council are submitted at an annual meeting, and are then elected; and the names of those intended for examiners are also submitted to the meeting, and are thus appointed at the same annual general meeting.

940. Do you think there is any doubt at all that a safe and competent board of examiners could be found from time to time in this state?—Not the least difficulty.

941. For the purposes of the whole of England and Scotland?—For every purpose.

942. I have asked you, with regard to the protection of the people against ignorance and so on, in relation to the compounding of medicines and the making up of prescriptions, do you consider the least necessity exists in relation to the sale of poison?—It would be a most desirable thing, but the difficulties are very great. But I am quite of opinion it would be desirable if it could be so arranged.

943. Supposing the Legislature should determine on subjecting chemists and druggists to any kind of examination in relation to the sale of poisons, do you think this minor examination, conducted by the examiners appointed by the Pharmaceutical Society, would be filled?—I do. I apprehend at once, if this examination were to be held in relation to the sale of poisons, a certain amount of toxicology would be introduced in the minor examination.

944. Supposing you think the examination may properly be applied to that purpose?—Yes.

945. Sir *John Shelley.*] Did I understand you to say you were one of the original members of the Pharmaceutical Society?—I am one of the founders.

946. Are you satisfied with the extent to which the Society has been able to go in the country at large, as to its powers of getting into outside districts?—So far from being satisfied I would wish every chemist and druggist to come forward for examination and join our society.

947. Looking to the interests of the public, you think it would be very advantageous that all chemists and druggists now carrying on business should be brought within the society in some way?—I do. I think it would be an advantage alike to the public, medical practitioners, and ourselves.

948. You would yourself, as one of the members of the council, facilitate any mode by which the outsiders could be brought in?—Any proper mode, certainly,

949. I do not understand there is any difference of opinion as to the necessity for examination; I understand you to say you think all persons carrying on the trade of chemists and druggists should be examined?—I do.

950. As far as that minor examination goes?—Yes; and the major one also, if he feel disposed to assume a higher position.

951. Do you, as a member of the Pharmaceutical Society, and having, as you have expressed it, an anxiety to see all persons carrying on the trade of chemist and druggist within your society, do you see any practical objection that all persons now carrying on the trade of chemist and druggist should be registered equally at this moment under an Act?—I think all outsiders should be registered equally, by the payment of a registration fee, and retain the name of chemist and druggist.

952. Why are not those who call themselves pharmaceutical chemists to be registered equally?—They are already registered under a separate Act of Parliament.

953. Would any damage accrue to them, supposing Parliament were to appoint a registration to be kept from this time, and to say that all persons now carrying on the trade of chemist and druggist should come in and be registered; and looking at the view you have taken in wishing the trade to be amalgamated, what objection could there be to persons hitherto pharmaceutical chemists coming in also?—I cannot imagine that Parliament would do such a thing, bearing in mind that we have laboured for 25 years on behalf of increased education, and having, in connection with such exertions, spent nearly 100,000*l.* I do not think it would be fair or reasonable to ask us to admit all to the name and title we now possess without examination.

954. That is to say, to have the advantages of that society?—There can be no member unless he is a pharmaceutical chemist; if you admit a member you at the same time say he is a pharmaceutical chemist.

955. Do you understand me to propose to you that all outsiders who have not yet subscribed and not been members of the Pharmaceutical Society should, the moment they are registered, come in and have the advantage of that society; is that what you understood to be the question I put?—Not at all; I understood you to ask me, whether we were desirous to do the best we could for those outside our Society, and I answer unhesitatingly that it has been, and still is, the anxious desire of the council, and of the Pharmaceutical Society to do the best we could for them, but we must have our own rights, which we have fought and worked for, protected.

956. You used the words, "in order to increase our numbers you would do" so and so; does that imply that from some cause or other your society has not extended itself satisfactorily?—It has often been matter of regret to me that our numbers

bers were not greater. If chemists and druggists were true to themselves, many of those outside should have been inside our ranks. We have members and associates in our society, and I believe there is no objection to the chemists and druggists being admitted as associates, if first placed on a Government register. I speak of this with regard to the effect of our Bill passing. If they make application to be so elected, and pay the society a half-guinea a year I would restrict their admission, without examination, to the associateship; I could not, in justice to the examined men and those who have been so long connected with the society, give them the title of pharmaceutical chemists.

957. Am I right in believing that several members of the examining body are unexamined persons, from the fact of their having been in business at the time the Act passed?—Yes.

958. Are there not at this moment among the outsiders some chemists who carry on the business of chemists and druggists who were, and are no longer, members of your society?—I believe there are.

959. You propose all these persons should come in and be registered in your society by this Bill; I understand your Bill to suggest all persons now carrying on the trade of chemist and druggist should come in and pay 10 *s.* 6 *d.* to your society?—Not at all; they would pay a registration fee, and then be eligible, but not compelled to become associates.

960. You propose that all persons carrying on the trade of chemist and druggist should come in and be registered under the Pharmaceutical Society, and for that registration should pay a fee to that society?—To be fixed by the Secretary of State.

961. To go to the funds of your society?—Undoubtedly.

962. Now, as far as that goes, I want to know whether it is not fair and right that those persons so admitted, coming under the examination, should be registered chemists under the Pharmaceutical Society?—They have not come in under the examination.

963. Are they not in exactly as fair and as good a position, so far as examination goes, as more than half of your society at this moment?—To that I reply at once: if a man has to build a house, he lays a foundation on which to rear his structure, and I think you are bound to look at the antecedents of the society, and to inquire if those men to whom you have made reference had not taken up pharmaceutical education, what would have been the consequence? Consider our founder, the late Jacob Bell, and look at our present position in Bloomsbury-square. I say there is no excuse for those parties to whom you have made reference, and whom you say are eligible for admission to the Pharmaceutical Society, but who have now for so many years stood aloof.

964. I think the public is very much indebted to the Pharmaceutical Society; but you are asking me, and you bring in a Bill and ask the Legislature to say, that all persons carrying on the business of chemists and druggists for the future and even for the present, as far as the registration goes, shall come in and pay a fee to that society: I ask you, as a member of that society, having already expressed a wish to take a course which shall bring in the chemists and druggists, do you see any objection, practically, to those who are now coming in to be registered to be considered, *pro tanto*, pharmaceutical chemists?—I do so, for this reason; if A. B. is a chemist and druggist and comes in and is placed on the register, and we should say to A. B., "stand there," it would assume that I insisted that A. B. should only be registered; but this is not so, for we invite him to come forward to be one of ourselves, and take the title of pharmaceutical chemist by examination.

965. Then I understand the course the chemist has to go through under the examination would be this: he would have to come to London at considerable expense, would he not?—That is not much, and may be got over.

966. Take things as they are now?—Very well.

967. If he masters the examination the fee is 10 guineas?—Yes.

968. If he fails he has nine returned to him?—Yes.

969. He is put to considerable expense during the time he is passing through that examination, living in London; that is so, is it not?—Yes.

970. What advantage has the chemist living at a distance, who cannot come and attend the lectures and take advantage of your halls; what encouragement do you give him to come in under your system, unless you give him in return something or other, that which he asks you, to admit him, and call him pharmaceutical chemist?—Are you referring to registration or examination, or both?

971. Registration solely; that is your Bill?—In reference to the parties who have to come from the country and be registered, and not examined, I believe some arrangement could be made by which those parties need not come to London to be registered.

972. Is there anything in your Bill as it stands which would not compel a man to come to London?—At present there is nothing said on this point.

973. Would you repeat to me what your objection is, that a person registered under an Act now to be passed should be put, as far as the minor examination and the registration go, on an equality with all others; what harm would be done to any party?—I do not conceive that the chemist and druggist has any claim to be put in a better position than the young man who came forward to undergo his minor examination; at the same time, I do not think he should be placed in a worse position.

974. That is as regards the future; I am talking of the person who is now carrying on the trade?—We give him the advantage of coming in without the examination.

975. That was the case when you established your society?—It was.

976. Are there not at this moment men of eminence carrying on business in various towns in the country, Manchester and Leeds, who are quite as competent, although unexamined and not pharmaceutists?—There are some such cases scattered throughout the towns; but, as to Edinburgh, there are very few chemists there of any consequence, with one or two exceptions, not connected with the society. As you have hinted at the fees, I may also state that our fees are far too large. If our fees for examination were lessened, as I hope they will be, many men throughout Scotland would join our society. It is not the examination so much as the payment of so large a sum of money.

977. I suppose you would have no objection to

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persons registered under the Pharmaceutical Society having some voice in the management of the society?—I would not object to them having a vote, but they should not be eligible to serve in the council unless they were pharmaceutical chemists.

978. You point to Edinburgh, and we know nearly all persons carrying on the trade of chemists in Edinburgh are members of the Pharmaceutical Society; are you aware, generally, whether that is the case throughout England?—I cannot go into the statistics of the various towns; I can tell you with regard to this matter in Edinburgh; by public advertisement I called a meeting at which 40 or 50 attended, and the Bill, No. 1, was gone through clause by clause, and the expression of opinion in its favour was unanimous; there was one dissentient voice; one party present thought registered assistants should be registered at an age less than 21, because in Scotland the apprentices sometimes begin their apprenticeships earlier than in England, and they are finished by the time they arrive at 18 or 19 years of age; then again, the petition in favour of the same Bill, which was signed by 105, was confined exclusively to masters and assistants.

979. You are applying this evidence to Edinburgh alone?—Yes.

980. Are you prepared to give evidence as regards the number of members of the Pharmaceutical Society, and what I have called the outsiders, in the principal large towns in England?—This I decline, as the registrar is present, who will give you every information on this subject.

981. Lord *Elcho.*] I should like to know whether you would consider this a satisfactory solution of the question; a measure founded on this principle:—

"1. Establish an examining body, the Pharmaceutical Society to be taken as a basis, with a liberal constitution, low fees, and government central, through an assessor, for regulation of examinations and fees.

"2. Two examinations:

"1. Minor.

"2. Major.

"3. All chemists and druggists, after a certain date, to undergo the minor examination to be entitled to registration.

"4. All persons so examined and registered to be entitled to qualify for the higher grade by undergoing the major examination.

"5. All persons now carrying on trade of chemist or druggist to be admitted to registration on payment of a moderate fee.

"6. No penalty on non-registration; but the sole protection to the public and the registered to be the *caveat emptor* principle, secured by penalties on those who assume falsely to be registered under Act.

"7. Prescriptions for prisons, workhouses, &c., to be made up only by registered chemists and druggists.

"8. Sale of poisons.—All poisons to be kept apart, legibly labelled, and in bottles or boxes, or papers of a special colour or description.

"9. All purchasers of poisonous drugs to sign receipt of same; a witness also."

I wish to know whether, in your opinion, such a measure as that would be a satisfactory solution. You will look at it (*the Paper was handed to the Witness*)?——

982. Sir *John Shelley.*] You have given the opinion as to the feeling in Edinburgh with regard to these two Bills; can you give us any opinion as to the feeling in Glasgow?—I know something of Glasgow; I know several of the chemists in Glasgow; I think they have about 13 or 14 pharmaceutical chemists there. They have an association of their own, and my belief is, if you give them some means of carrying on examinations, in favour of the Pharmaceutical Society, along with a reduction of fees and their own examining board, instead of having 14 or 15, you would probably have 50 or 60 members of our society.

983. As they stand at this moment, may I take it or not that Glasgow has been favourable to the Bill which is mine, called No. 2?—There was a large meeting at which your Bill was nowhere; but I am sorry to say the meeting decided, by a small majority, that the Pharmaceutical Bill was not to be supported. Your Bill was not put to the vote at all.

Jovis, 18° *die Maii* 1865.

MEMBERS PRESENT:

Mr. Ayrton.	Mr. Charles Forster.
Mr. Baring.	Sir Fitzroy Kelly.
Mr. Black.	Mr. Roebuck.
Mr. Sclater-Booth.	Mr. Hastings Russell.
Dr. Brady.	Mr. Schneider.
Lord Elcho.	Sir John Shelley.
Sir James Fergusson.	Mr. Charles Wynn.

THOMAS GEORGE BARING, Esq., IN THE CHAIR.

Mr. JOHN MACKAY was called in; and further Examined.

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984. Sir *John Shelley.*] MERELY to confirm what I understood to be the evidence you gave; in your opinion, is it advisable, looking to the interests of the public and the trade of chemist and druggist in general, that, as far as possible, all chemists and druggists should be brought, if they can, under whatever regulations are made; and, under those circumstances, if fees are to be taken for registration and examination, you are of opinion those fees should be much reduced from what they are now, and they should be as low as they consistently can be?—I am quite of that opinion.

985. Lord *Elcho.*] I put into your hands at the last meeting some heads of a Bill; have you considered those heads?—I have; and here is a short statement, which I can either read or hand to you.

986. Read it, if you please?—"The Pharmaceutical Society is established as an examining body, is liberal in its constitution; fees subject to bye-laws, sanctioned by the Secretary of State, and are capable of revision. I agree in thinking fees should be reduced; Government control unnecessary, and I believe not required by the medical bodies." I think, as a rule, medical bodies would desire to be free from being members of the board of examination.

987. You say the constitution at present is liberal, and though the fees should be lowered, you do not think Government control in any way necessary; in the event of the Pharmaceutical Society being established as the future examining body, I imagine you would think it desirable that the other chemists and druggists who do not belong to that body should be connected with it?—Certainly I do.

988. How do you consider it could be better done?—Following the plan adopted by the Pharmaceutical Society of having minor and major examinations.

989. And do you propose to give any voice to the outside chemists in the selection of the council of the Pharmaceutical Society?—Under certain regulations.

990. Yo do propose it?—Yes.

991. At present they have no voice?—They have not.

992. But you would give every chemist and druggist now not a member of the Pharmaceutical Society who passed an examination, a voice in the management of its affairs?—We would extend the power of voting in the following manner; that is to say, those at present unconnected with the society, but certified as *bonâ fide* chemists and druggists in the true sense of the word, would be placed on the proposed Government register, and thus be eligible for admission to the Pharmaceutical Society without examination, as associates of the society, on payment of the usual fee paid by associates, namely, half-a-guinea a year; and thus, being an associate, he would have a voice or vote in the affairs of the society.

993. Assuming any legislation that took place, and allowing all existing chemists and druggists to register without examination, you would allow persons so registered without examination, to become members of the Pharmaceutical Society on payment of a fee?—Associates only, if so disposed.

994. Sir *John Shelley.*] Perhaps it would be convenient if Mr. Mackay would explain what is an associate?—Those parties who undergo the minor examination and pass are termed associates.

995. Lord *Elcho.*] Could you put in the rules, or some other gentleman would perhaps put in the charter and the rules of the Pharmaceutical Society?—The secretary who is present could, I believe. (*The document was then handed in.*—Vide *Appendix.*)

996. Would you go on to the next head?—"Our Board for examination are not imperatively members of our own body;" ("skilled persons" is the term); "but have been practically so, since we have had a well formed board." At first we had a difficulty in getting pharmaceutical chemists, with whom to form a board, and we asked one or two professional gentlemen to assist in the examinations. I speak of what was done in Edinburgh, from my own experience. In the early days of our examinations, we were assisted by scientific men, teachers of chemistry. Dr. George Wilson, for instance, was invited to come and assist in the examinations, but we were soon able to conduct the examinations by forming a board of our own.

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997. Sir *John Shelley.*] Your evidence now goes to the board and the management at Edinburgh?—It does.

998. Can you state whether the same thing applies to the board and management in London?—In this respect I believe I am safe in saying it does. I speak certainly and positively as regards its operations in Edinburgh; I am, therefore, opposed to a Government assessor. On this subject I refer to my evidence in 1852; where, in regard to the Pharmaceutical Bill, this point was discussed. "Farther, we are bound to examine every candidate, and to do so without regard to the manner in which he has obtained his knowledge;" that is to say, we do not prescribe that our candidates shall attend certain professors or lecturers, or certain courses of lectures; but if they come before us, and prove they possess the requisite amount of knowledge, they pass; on passing the major examination the party is at once placed on the Pharmaceutical Register, and becomes a pharmaceutical chemist; his afterwards becoming a member of the society depends upon his own wish, and the society's election. Thus he may remain a pharmaceutical chemist, irrespective of the Pharmaceutical Society altogether; and I believe there are some few cases where parties have taken the higher examination, have become entitled to use the term "pharmaceutical chemist," and have used it, remaining unconnected with the society; but the rule is that application is made to the council, and they are admitted, on payment of the annual subscription of one guinea, to membership. I do not think *caveat emptor* would be sufficient. No objection to clause 7. Schedule of dangerous drugs and poisons desirable as a protection to the public, and the sale of those should be confined entirely to registered chemists and druggists. I think increased education should be the true basis of protection to the public.

999. Lord *Elcho.*] Registration you would assume to be after admission; so that the chemist and druggist would be only eligible after examination?—After examination. "No objection to clause 9. I have reason to believe that the Pharmaceutical Society are quite determined not to cede the title of pharmaceutical chemist to those not now entitled to registration." We stand firm on that point. We think the title should only be given to those who are disposed to come before the board of examiners and pass the examination, in which case we should be too glad to receive them.

1000. Mr. *Ayrton.*] With regard to the title of pharmaceutical chemist, is that now enjoyed only by those who have gone through an examination?—Since 1853, the passing of the Act, no one has been able to be a pharmaceutical chemist in any other way than by passing the examination.

1001. How many persons have been examined, who now use the title of pharmaceutical chemist, and how many use it who have not been examined?—I am not prepared to state how many. Mr. Brembridge, the registrar, has all those numbers, and he will be able to give them to you.

1002. Sir *FitzRoy Kelly.*] Those pharmaceutical chemists who have not been examined are original members?—Precisely.

1003. Under the charter?—Yes. "I think the society would not be true to its educational objects nor to the express wishes of the medical bodies, as contained in their resolutions, if it permitted the test for the pharmaceutical title to be lowered." I think the minor examination quite sufficient for chemists and druggists.

1004. Lord *Elcho.*] And the legislation proposed, in those heads I submitted to you, namely, the *caveat emptor* principle, you consider insufficient, and you should have something more stringent?—I would.

1005. *Chairman.*] When you say the Pharmaceutical Society are opposed to Government interference, do you mean they would altogether object to having any assessor appointed in order to take care, on the part of the public, that this minor examination should not be put at too high a pitch, or the fees too high; but I am rather speaking of examination?—I do not think the society would object; I simply give it as my opinion that such an appointment is unnecessary, but I do not think there would be a positive objection.

1006. It would not be an insuperable obstacle to carrying out the system of examination?—Certainly not; we have nothing to hide, and would gladly welcome the presence of any medical practitioners who might feel disposed to be present at our examination.

1007. The reason being in order to take care there should be no reason to suppose the society was endeavouring to restrict the trade generally; that would be the reason?—I simply repeat, I cannot see its necessity, at the same time I do not for a moment suppose the society would object.

1008. Mr. *Ayrton.*] Did the original charter define what a pharmaceutical chemist was, or are we to understand that a pharmaceutical chemist is a person who sells drugs for the purpose of their being used internally or externally for the cure of human disorders?—That is the meaning of the term; he is supposed to be a man with a certain amount of education, prepared to compound medicines generally, and prescriptions with accuracy.

1009. Do I understand the object is to compound them for the purpose of treating human disorders; I want to know what it is, for I have not the least idea at present?—If you were ill and attended by a medical man, and that medical man came and wrote a prescription, and wished that prescription compounded, it might go to a pharmaceutical chemist, and that pharmaceutical chemist would be expected in *propria personæ*, or by a qualified assistant, to compound with accuracy and care that prescription.

1010. Is he a person who compounds drugs under a prescription to be made under the direction of a registered medical man?—And generally that other matters, such as tinctures, pills, ointments and powders, should be made up with correctness.

1011. Is he a person who is engaged in compounding or making up something or other to be used only under the prescriptions of medical men?—A pharmaceutical chemist is quite distinct from the professed analytical chemist. He not only compounds prescriptions, but vends medicines for family and domestic use. Having passed an examination, he is supposed to be acquainted with chemistry, and thus to prevent incompatibles from being mixed, so as to prove useless, and even sometimes dangerous.

1012. I understand a chemist is a person who either sells drugs or chemical substances, in a simple or compound form. I want to know what a pharmaceutical

a pharmaceutical chemist is; what is the essential property of a pharmaceutical chemist; is he a person who sells certain substances for the purpose of curing human disorders, internally or externally?—To sell certain substances that may be used for that purpose, and other purposes too.

1013. What are the other purposes?—Most chemists, if you were to send to them, would sell you mustard, black pepper arrowroot, and other substances used in families.

1014. Is he a pharmaceutical chemist?—Most chemists sell these and a variety of other things.

1015. What is the peculiarity of a pharmaceutical chemist; is it confined to persons who sell substances for the purpose of curing human disorders?—Not entirely.

1016. Will you give me all the other purposes for which he is to sell other substances to make him a pharmaceutical chemist, as compared with a chemist and druggist who is not pharmaceutical?—The sole difference consists, in a certain measure, of education. The chemist and druggist, as at present, may be equal to a pharmaceutical chemist, with this difference, that a pharmaceutical chemist has either read up or attended lectures, and can better undergo an examination than the man without the same knowledge who opens a shop and compounds prescriptions. One is recognised by law as a man qualified to carry on the purposes of his profession, which I hold to be chiefly and primarily prescriptions; but as this alone would not serve in this country, at present prices, to keep alive pharmaceutical chemists, they add various other things.

1017. Are we to understand that a pharmaceutical chemist is a person who compounds and mixes drugs, and also has a knowledge of the use of those drugs, and other purposes?—Certainly.

1018. What is the extent of the knowledge and use he is to have?—He is expected to recognise various drugs, and to say whether they are good or bad. He is then asked their properties and doses. Take scammony as an instance. Opium may be cited as another example, and he is expected not only to give the dose of this article, but also the various pharmacopœia preparations into which it enters, whether these may be tinctures, powder, or pills. Chemistry generally is a science with which he must show an intimate acquaintance.

1019. You have at present no definite view of the pharmaceutical chemist other than a person who goes through a certain examination which has been prescribed by somebody or other?—That is the position of the pharmaceutical chemist.

1020. And that knowledge, to a rather large extent, is the knowledge of the apothecary and surgeon?—We have no apothecaries and few surgeons connected with the dispensing of drugs in Scotland. When any one speaks of an apothecary in Scotland, what is intended is a pharmaceutical chemist, or a chemist and druggist. No such person exists in Scotland as an apothecary, in the sense understood in England and Ireland.

1021. Do you know surgeons in Scotland make up their own medicines?—Very few. That system is rapidly dying out; and, as evidence of it, I may mention that within the last few years chemists and druggists have sprung up in small towns where formerly such a thing was never thought of. I may mention the small town of Dunblane as an instance; while there is a chemist in East Llinton, in neither of which places are there many inhabitants.

1022. Sir *John Shelley.*] Has he been examined?—No, he is a chemist and druggist; both are well capable of supplying the wants of the places; and would come at once on the register now proposed. Again, at another small place (Tranent) a chemist has sprung up, and is doing well. He also is one who would give ample evidence of being fit for registration.

1023. What objection is there to a medical man, such as you have south, say in Sussex, in an in-and-out-of-the-way place resident there, making up medicines from his own prescriptions; what objection is there to it?—Not the least objection so far as we are concerned, but a great objection by medical men, for this reason: in a country district the medical man has frequently long rides to take, probably including an area of 50 or 60 miles; and when he comes home weary and tired, he is neither fit nor inclined to set to work with pestle and mortar to make up pills or compound medicines. He would rather be supplied, if possible, by some one in the village.

1024. Mr. *Ayrton.*] How many persons in Scotland are carrying on the business of compounding and selling drugs, who are not members of the Pharmaceutical Society?—I should think probably throughout Scotland, 400 or 500.

1025. What proportion do they bear to the number who are members of the Pharmaceutical Society?—In Scotland I do not think there are more than 120 or 130 connected with the Pharmaceutical Society.

1026. And the others would be 500?—Roughly, between 400 and 500.

1027. And how many of the 400 or 500 would require the thorough knowledge you have spoken of for the duties of a pharmaceutical chemist?—Do you refer to the major examination?

1028. What you are speaking of?—If you asked the minor examination, I could answer more readily. I should think half would be prepared to undergo the major examination. As I stated in my former examination, it is not the fear of examination but the high rates. A man in the country cannot easily take away 10 or 15 guineas from his business.

1029. The minor has not the effect in your mind of making a man a pharmaceutical chemist?—Certainly not. It would give him, however, an amount of education and information sufficient to enable him to compound prescriptions.

1030. The major examination of which you have spoken, is not that examination that surgeons are subjected to before they can get the diploma?—No; there is a very great difference.

1031. Are they not compelled to answer on this subject, as well as on a variety of subjects on the question of treatment of disease?—Undoubtedly; but, in many cases, the knowledge of pharmacy required by the College of Surgeons or Physicians is not of a practical kind; the chemist, in getting up his knowledge of pharmacy, &c., does so for the purpose of promoting his trade and earning his daily bread; in the other case it is thought comparatively unimportant by the surgeons and physicians, and he generally gets up a certain amount of information to enable him to pass his examination.

1032. It is one of the branches in which he must be examined?—It is.

1033. You have explained to the Committee that the pharmaceutical chemist is a person who knows

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knows the purpose and value, if I may say so, to which the drugs may be applied?—He should possess such knowledge.

1034. Must not that be an essential part of the knowledge of a doctor, who is to prescribe the use of them?—Theoretically it should.

1035. It is, in fact, a branch of his education?—Certainly.

1036. Are there any doctors in Scotland who do make up their own medicines the same as in England?—There are some, but they are the exception, and those who do so are not of the highest standing in their profession.

1037. Sir *John Shelley.*] Do you know Fort William?—Not very well.

1038. Mr. *Ayrton.*] There is a distinction between medical practitioners in England and Scotland?—In large towns there is no such thing as a surgeon or physician of any great repute keeping openshop; those who do so have second-rate practice. There are surgeons who practise as well as dispense, and we hold them to do the pharmaceutical chemist a certain amount of injury. People go to such shop get medicine, and are visited in their houses, and thus the chemists shop gets the name of the doctor's shop. Thus many apply for advice to the chemist; but, unless in very trifling cases, the chemist sends such inquirers to the medical practitioner.

1039. I ask you with reference to surgeons who make up their own medicines, not who keep open shops?—That is only done, I believe, in country towns; I do not think it is the practice for surgeons in any town of consequence in Scotland to keep a surgery; many years ago it was common enough.

1040. Explain what you mean by "large towns," as distinguished from "country towns"?—Yetholm, in the south of Scotland, occurs to my mind as a place where the surgeon is compelled to dispense and supply his own medicines, and I happen to know that such is the case; and so you will find, scattered here and there throughout the length and breadth of Scotland, medical men who compound their own prescriptions, but invariably from necessity, not choice.

1041. Are there any surgeons who make up their own prescriptions?—I have, I think, already answered this question.

1042. What is the population of the towns in which the line may be drawn between those who make up and those who do not make up?—I am not prepared to say; but medical men in any town of moderate size do not make up their own medicines; take Galashiels: there are three there, and not one makes up his own recipes.

1043. Sir *John Shelley.*] That is a big town?—Take Melrose, which is very much smaller; there are two medical men.

1044. Mr. *Black.*] Three, I supposed?—One has gone lately; I am speaking of Dr. Clarkson and Dr. Brown; Dr. Clarkson sends out some of his medicine, and Dr. Brown, I believe, employs the druggist there to send out his medicine.

1045. Lord *Elcho.*] Do you know a town called Haddington?—I do.

1046. That is not far from Edinburgh?—About 20 miles.

1047. What is the size of that town?—I should think it was a very quiet place, except on a market day. The people on a market day would be considerable.

1048. The census makes it between 4,000 and 5,000 inhabitants?—Near 5,000, I believe.

1049. Do you know how many medical men there are?—A good many.

1050. Do you know whether the medical men dispense their own medicines?—I am not speaking from my own knowledge, but, if I were to give an opinion, I should imagine not. Mr. Watt is a chemist in Haddington for the last 15 years, and I have heard him speak of doctors coming about his shop, and therefore fancy they must call for the purpose of having their prescriptions compounded.

1051. And in a town of 4,000 inhabitants is the effect of there being a chemist and druggist to whom you supply drugs, that medical men do not themselves make up their own prescriptions?—It should have the effect of inducing medical men to throw the dispensing into the druggist's hands.

1052. Do you think it necessarily does?—Not of necessity; but I say it should.

1053. Mr. *Black.*] Are you aware of what the opinion of the College of Surgeons and Physicians in Edinburgh, in regard to the two Bills now under discussion?—I will state what I know about the feelings of the College of Physicians and the College of Surgeons in Edinburgh; it is this: when the two Bills came down to Edinburgh, we thought it a right and proper thing to interest the Lord Advocate and yourself in the Bills. We had an interview with you, and a deputation also waited on the Lord Advocate. The presidents of the College of Physicians, Dr. Burt, and the College of Surgeons, Mr. Benjamin Bell, Professor Maclagan, Professor Archer, and Dr. Stevenson M'Adam, with the president and vice-president of our society, agreed to wait on his Lordship from the conviction that the Bill would probably pass. Several days after this I heard that some members of the colleges had raised or were about to raise an opposition, from a feeling that by over education the pharmaceutical chemist might become a visiting practitioner, and this in time become what the apothecaries in England became; and I was told some members of the college were so strong in their feelings, that they wished to petition against both Bills. There was a meeting of the College of Physicians and a committee appointed. I saw Professor Christieson before I left home, and may say that he, as an individual, is not at all afraid of increased education doing harm, so far as the pharmaceutical chemist is concerned; it would rather be an advantage to the public. This Committee will, I believe, watch the proceedings under this Bill. But any objections made by the College of Physicians will, I feel certain, be arranged, and thus I do not fear opposition from this body. With regard to the College of Surgeons, I am not so able to speak, as I did not see Dr. Bell on the subject before leaving.

1054. They sent me up a petition against both Bills, signed by Mr. Bell?—He was one who was to have been with the deputation to the Lord Advocate, but was prevented by a professional engagement.

1055. One would have expected, they being so interested in having prescriptions properly made up, they would have been rather in favour of the Bill?—I have come in contact with a good many surgeons and physicians in connection with this Bill, and never met one who had the slightest wish to oppose it; and I must express my surprise to hear that you had got a petition sent up against both Bills.

1056. There

1056. There must have been a majority of the surgeons who voted for petitioning against the Bill?—Doubtless; but it might be a small majority.

1057. Dr. *Brady.*] Does the College of Surgeons examine in pharmacy?—Yes.

1058. Is it connected with the trade of pharmacy?—Not the least; you will observe, under the proceedings of the medical council, there was an attempt that the College of Surgeons should retain the power of examining and giving certificates in pharmacy, which was put to the vote and lost; they examine their own candidates for a diploma as practitioners in medicine and surgery, but not with a view to open shop as chemists.

1059. *Chairman.*] Have you any further observations you wish to make to the Committee on the subject?—I think not; there were petitions presented from the town council of Edinburgh, from the town council of Dunfermline, Dundee, and from the convention of Royal Burghs in Scotland, wholly in favour of Bill, No. 1.

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APPENDIX.

Appendix, No. 1.

CHARTER, ACT, and BYE-LAWS of the PHARMACEUTICAL SOCIETY of GREAT BRITAIN. App. No. 1.

THE ROYAL CHARTER OF INCORPORATION, granted to the Society, 18 February 1843.

VICTORIA, by the grace of God, of the United Kingdom of Great Britain and Ireland, Queen, Defender of the Faith, to all whom these presents shall come, greeting.

WHEREAS it hath been represented to Us, on the petitions of William Allen, Charles James Payne, Richard Hotham Pigeon, and others, that they and divers other persons, Our loving subjects, have associated together, and have formed themselves into an association, called "The Pharmaceutical Society of Great Britain," for the purpose of advancing chemistry and pharmacy, and promoting an uniform system of education of those who should practise the same; and also for the protection of those who carry on the business of chemists and druggists; and that it is intended also to provide a fund for the relief of the distressed members and associates of the society, and of their widows and orphans; and that it would be of great advantage if the said society were incorporated; and they have besought Us to grant to them, and to those who shall hereafter become members of the same society, Our Royal Charter of Incorporation for the purposes aforesaid: Now know ye, that We, being desirous of encouraging and promoting so laudable and benevolent a design, of Our special grace, certain knowledge, and mere motion, have willed, granted, and declared, and do by these presents, for Us, Our heirs and successors, will, grant, and declare, that the said William Allen, Charles James Payne, Richard Hotham Pigeon, and such other of Our loving subjects as have formed themselves into and are now members of the said institution or society, or who shall at any time hereafter become members thereof, according to such regulations or bye-laws as shall hereafter be framed or enacted, shall, by virtue of these presents, be members of, and form one body politic and corporate for the purposes aforesaid, by the name of "The Pharmaceutical Society of Great Britain," by which name they shall have perpetual succession, and a common seal, with full power and authority to alter, vary, break, or renew the same at their discretion; and by the same name to sue and be sued, implead and be impleaded, answer and be answered unto, in every court of Us, Our heirs and successors, and be for ever able and capable in the law, to purchase, receive, possess, and enjoy, to them and their successors, any goods and chattels whatsoever; and also be able and capable in the law, notwithstanding the statutes of mortmain, to take, purchase, possess, hold, and enjoy, to them and their successors, a house, and any messuages, lands, tenements or hereditaments whatsoever, the yearly value of which shall not exceed in the whole, at any one time, the sum of 2,000 *l.*, computing the same respectively at the rack rent which might be had or gotten for the same at the date of these presents, in respect of any lands, tenements, or hereditaments, now held by or in trust for the said society, and as to any lands, tenements, or hereditaments hereafter to be purchased by the said society, at the rack rent which might be had or gotten for the same at the time of the purchase or acquisition thereof; and also to sell any lands, tenements, and hereditaments, and to purchase again other lands, tenements, and hereditaments, not exceeding in the whole, at any one time, the annual value aforesaid, to be estimated as aforesaid, and to act in all the concerns of the said body politic or corporate, for the purposes aforesaid, as fully and effectually, to all intents, effects, constructions, and purposes whatsoever, as any other of our liege subjects, or any other body politic or corporate in our United Kingdom of Great Britain and Ireland, not being under any disability, might do in their respective concerns: And We do hereby grant our special licence and authority unto all and every person and persons, bodies politic and corporate, otherwise competent to grant, sell, alien, and convey, in mortmain, unto and to the use of the said institution or society, and their successors, any messuages, lands, tenements, or hereditaments, the whole thereof to be held by the said society, at any one time, not exceeding such annual value as aforesaid.

Petitioners.

Title.

Object.

Benevolent Fund.

Members according to Bye-laws.

Common seal.

Power to buy and hold lands. &c.

Power to sell.

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Members.

And Our will and pleasure is, and We further grant and declare, That the Pharmaceutical Society of Great Britain shall consist of persons to be called members thereof, and that such members shall be chemists and druggists, who are or have been established on their own account, or who shall have been examined in such manner as the council of the said society shall deem proper, or shall have been certified to be duly qualified for admission as members, or else shall be persons elected as superintendents by the council of the said society; and all of which members shall subscribe to the funds of the said society in such manner as shall be provided by the regulations thereof; and there shall also be admitted to all the privileges and benefits of the said society, excepting the right of being present at the general meetings thereof, or of holding any office in the same, persons to be called associates of the said society; and such associates shall be assistants to chemists and druggists; also apprentices or students in pharmacy and chemistry; and such associates, apprentices, and students shall first be duly examined in such manner as the council of the said society shall deem proper, and shall be certified to be duly qualified for admission thereto as associates, apprentices, or students respectively, and shall subscribe to the funds of the said society, in such manner as shall be provided by the regulations thereof.

Superintendents.

Subscriptions

Associates.

Apprentices or students.

Subscriptions.

General meetings.

Council.

Council and general meetings to have direction.

Majority to decide.

Chairman's casting vote.

And We further will and declare, That there shall be general meetings of the members of the said society hereby incorporated, to be held from time to time as hereafter mentioned, and that there shall always be a council to direct and manage the affairs of the said society; and that the said general meetings and the council shall have the entire direction and management of the same society, in the manner and subject to the regulations hereinafter mentioned. And Our will and pleasure is, that at all general meetings and meetings of the council the majority of the members present having a right to vote thereat respectively, shall decide upon the matters propounded to such meetings, the person presiding therein having, in case of an equality of numbers, a second or casting vote.

Number of council, president, vice-president, and treasurer.

And We do hereby also will, grant, and declare, That the said council shall consist of a president, a vice-president, a treasurer, and 18 other members, and that the said William Allen shall be the first president, Charles James Payne the first vice-president, and Richard Hotham Pigeon the first treasurer; and that the other persons now being members of the council of the said society, with the president, vice-president, and treasurer, shall be the first members of the council of the said body politic and corporate, and shall continue such until the first general meeting for the election of officers shall be held in pursuance of these presents.

Annual general meetings.

Special general meetings.

Requisition for special general meetings.

Council to convene general meetings.

And We do hereby further will, grant, and declare, That it shall be lawful for the members of the said society hereby incorporated to hold general meetings once in the year, and also such special general meetings as the council may from time to time think proper; and that the annual general meetings shall be held on the third Tuesday in the month of May in each year, or such other day as near thereto as shall be determined by the council. And further, that upon the requisition, in writing, of 30 members of the said society entitled to vote at any meeting, requiring the said council to convene a special general meeting of the said society for the purpose specified in the requisition, such meeting shall accordingly be convened by the said council within such reasonable time as the council shall think fit, they first giving due notice thereof, and of the purposes for which the same is convened.

Date of annual general meetings.

Election of council and auditors. Election by ballot.

And We do further will, grant, and declare, That the members of the said society shall and may, on the third Tuesday in the month of May 1843, and also on the third Tuesday in the month of May in every succeeding year or as near the same as conveniently may be, assemble at the then last or other usual place of meeting of the said society, and proceed by method of ballot to nominate and appoint the members of the council in manner hereinafter provided, and five auditors of the accounts of the said society.

Twenty-one members of council.

Two-thirds of council to go out.

And We do further will and declare, That at the election of the council to be held in the year 1843, there shall be elected 21 members of the council; and at the election to be held in the year 1844, two-thirds of the then members of the council shall go out of office, such members to be determined by lot; and that in the election of the council in the year 1845, the remaining one-third of the members of the council elected in 1843, and also one-half of the members elected in 1844 (such one-half to be determined by lot as aforesaid), shall go out of office; and that in every succeeding year two-thirds of the members of the council, being such as shall have been longest in office, computing from their last election, respectively shall go out of office.

Members eligible for re-election.

And We do further will and declare, That the members who shall at any time go out of office shall nevertheless be re-eligible as members of the council.

Vacancies in council or auditors to be filled up by council.

And We do further will and declare, That in the case of the death, resignation, or removal of any member of the council or auditor, it shall be lawful for the council themselves to elect and appoint some other person, being a member of the said society, to supply the place of such member of the council or auditor; and the person so appointed shall be taken in all respects, as regards the duration of office, to represent the person in whose stead he has been appointed.

Removal of members.

And We do further will and declare, That it shall be lawful for any meeting of the council, at which not less than 12 members shall be present, and with the consent of three-fourths of the members so present, but not otherwise, to remove any member from the said society, and he shall thereupon cease to be a member of the said body corporate: and We do further will and declare, that the council hereby directed to be appointed, and the council of the said society for the time being, or any seven or more of them, all the members thereof having been first duly summoned to attend the meetings thereof, shall and may, at their first meeting after the election of the council, elect and appoint from among their

Quorum of the council.

their number a president, a vice-president, and a treasurer, and also appoint a proper person to be the secretary thereof.

President, vice-president, treasurer, and secretary.

And We do further will and declare, That the said council shall and may, once in every month, hold meetings, and also such further meetings as the president or any five members thereof, shall by writing under his or their hands direct the secretary to give notice of; but no business shall be done at any such meeting unless there be such number of members present as shall be determined from time to time by the bye-laws of the society to form a quorum.

Council to meet monthly.

And We further will and declare, That at all general meetings of the said society, the president, or in his absence the vice-president, or in his absence such member of the Council, as shall be elected by the members present at the meeting, shall preside, or if there be no such member of council present, then such other member of the society as shall be elected by the members present to preside; and at all meetings of the council the president, or in his absence the vice-president, or in his absence such member of the council as shall be elected for that purpose by the other members present, shall preside.

Chairmanship of meetings.

And We do also grant, will, and declare, That it shall be lawful for the council of the said society for the time being, by themselves, or such competent persons as they shall think fit to appoint, to examine and to decide upon the admission or rejection of members, associates, apprentices, or students of the said society hereby incorporated, and to grant such certificates or diplomas as they shall think proper, to the persons whom they shall deem qualified to be such members, associates, apprentices, or students, as aforesaid; and to elect honorary and corresponding members of the said society; who shall have all the privileges thereof, except the right of being present at general meetings, and to appoint and remove and re-appoint all the subordinate officers of the said society, and the said council shall have the sole control and management of the real and personal property of the said society, subject to the bye-laws thereof; and shall make provision thereout, or out of such part thereof as they shall think proper, for the relief of the distressed members or associates of the said society, and their widows and orphans, subject to the regulations and bye-laws of the said society.

Appointment of examiners.

Grant certificates.

Honorary and corresponding members.

Officers of the society.

Council to have sole control of property.

Benevolent fund.

And We do further will, grant, and declare, That the whole property of the said body politic and corporate shall be subject to the management, direction, and control of the council of the said society, and that they shall have full power and authority to sell, alienate, and change, or otherwise to dispose of the same as they shall think proper; but that no sale or mortgage of any messuage, lands, tenements, or hereditaments belonging to the said body corporate shall be made, except with the approbation and concurrence of a general meeting of the members of the said society specially convened for such purpose.

Council to sell messuages, lands, &c., only on authority of general meetings.

And We do further will and declare, That it shall be lawful for the said council to the best of their judgment and discretion to make and establish such bye-laws as they shall deem proper and necessary for regulating the affairs of the said society; and also the number and description of its officers; and also the times, place, and manner of examining candidates for admission; and also of removing and electing the members, associates, apprentices, and students of the said society, and all subordinate servants, officers, and attendants, as shall be deemed necessary or useful for the said society; and also for filling up from time to time any vacancies which may happen by death, resignation, removal, or otherwise of the president, vice-president, treasurer, members of council, auditors, secretary, or any of the offices or appointments constituted or established for the execution of the business and concerns of the said society; and for regulating and ascertaining the qualifications of persons to become members, associates, or apprentices of the said society respectively; and for granting diplomas and certificates to members, associates, apprentices, and students; and also the sum and sums of money to be paid by them respectively, or any of them, whether upon admission or otherwise, towards carrying on the purposes of the said society; and also the number, qualifications, and privileges of such persons as they may from time to time deem it proper to admit as honorary or corresponding members; and the amount and mode of relief to be afforded to the distressed members and associates of the said society, and their widows and orphans respectively; and such bye-laws from time to time to vary, alter, or revoke, and make such new and other bye-laws as they shall think most useful and expedient, so that the same be not repugnant to these presents, or to the laws of this Our realm: Provided that no bye-law hereafter to be made, or alteration, or repeal of any bye-law which shall hereafter have been established by the said council hereby directed to be appointed, shall be considered to have passed, and be binding on the said society, until such bye-laws or alteration, or repeal of any bye-laws shall have been confirmed by three meetings of the said council. In witness whereof We have caused these Our letters to be made patent. Witness Ourself at Our palace at Westminster, the Eighteenth day of February, in the Sixth year of Our Reign.

Council to make bye-laws.

To regulate the appointment of officers.

Arrangement of examinations.

Removal and election of members.

Appointment of servants.

Filling up vacancies.

Regulating qualifications.

Granting certificates.

Fixing sums to be paid.

Qualifications of honorary and corresponding members.

Amount of relief.

To alter and vary bye-laws.

By Writ of Privy Seal,
Edmunds.

SEAL.

App. No. 1.

PHARMACY ACT.—15 & 16 Victoria.

CAP. LVI.

AN ACT for regulating the Qualifications of Pharmaceutical Chemists.

[30th June 1852.]

WHEREAS it is expedient for the safety of the public that persons exercising the business or calling of pharmaceutical chemists in Great Britain, should possess a competent practical knowledge of pharmaceutical and general chemistry, and other branches of useful knowledge: And whereas certain persons desirous of advancing chemistry and pharmacy, and of promoting an uniform system of educating those who should practise the same, formed themselves into a society called "The Pharmaceutical Society of Great Britain," which society was on the 18th day of February 1843 incorporated by Royal Charter, whereby it was provided that the said society should consist of members who should be chemists and druggists, who were or had been established on their own account at the date of the said Charter, or who should have been examined in such manner as the council of the said society should deem proper, or who should have been certified to be duly qualified for admission, or who should be persons elected as superintendents by the council of the said society: And whereas it is expedient to prevent ignorant and incompetent persons from assuming the title of, or pretending to be pharmaceutical chemists or pharmaceutists in Great Britain, or members of the said Pharmaceutical Society, and to that end it is desirable that all persons, before assuming such title, should be duly examined as to their skill and knowledge by competent persons, and that a register should be kept by some legally authorised officer of all such persons: And whereas for the purposes aforesaid, and for extending the benefits which have already resulted from the said Charter of Incorporation, it is desirable that additional powers should be granted for regulating the qualifications of persons who may carry on the business of pharmaceutical chemists; Be it Enacted, by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons in this present Parliament assembled, and by authority of the same,

Charter, dated 18 Feb. 1843, confirmed, save as altered.

I. That the said Charter of Incorporation granted to the said society on the 18th day of February 1843, save and except such part or parts thereof as are hereby altered, varied, or repealed, shall be and the same is hereby confirmed and declared to be in full force and virtue, and shall be as good and effectual to all intents and purposes, as if this Act had not been passed.

Power to council to alter bye-laws, provided they are approved by a general meeting of society and the Secretary of State.

II. The Council of the said Pharmaceutical Society shall be, and the same are hereby authorised and empowered to alter and amend the bye-laws of the said society, made and established under or in pursuance of the said Charter of Incorporation, and to make and establish such new or additional bye-laws as they shall deem proper and necessary for the purposes contemplated by the said Charter or by this Act: Provided always, that all such original bye-laws, and all altered, amended, or additional bye-laws shall be confirmed and approved by a special general meeting of the members of the said Pharmaceutical Society, and by one of Her Majesty's Principal Secretaries of State: Provided also, that the existing bye-laws of the said society shall continue in force until the next annual meeting of the said society to be held in the month of May 1853.

Manner of voting.

III. At all meetings of the said society at which votes shall be given for the election of officers, all members entitled to vote may give their votes either personally, or, in cases of residence exceeding five miles from the General Post Office, St. Martin's-le-Grand, London, by voting papers authorised by writing, in a form to be defined in the bye-laws of the said society, or in a form to the like effect, such voting papers being transmitted under cover to the secretary, not less than five clear days prior to the day on which the election is to take place.

Council to appoint registrar, &c.

IV. The council of the said Pharmaceutical Society shall, within three calendar months after the passing of this Act, appoint a fit and proper person as a registrar under this Act, and the council of the said society shall have the power to remove the said registrar, or any future registrar to be appointed under this Act from the said office, and from time to time to appoint a new registrar in the room of any registrar who may die or retire, or be removed from office as aforesaid, and also to appoint and remove from time to time a deputy registrar, and such clerks and other subordinate officers as may be requisite for carrying out the purposes of this Act, and also to pay suitable salaries to the said registrar, deputy registrar, clerks, and officers.

Registrar to make registers of members of society, &c., and to keep an index and books, as may be required.

V. The registrar to be appointed under or by virtue of this Act, shall from time to time make out and maintain a complete register of all persons, being members of the said society, and also of all persons being associates and apprentices or students respectively, according to the terms of the Charter of Incorporation, and shall keep a proper index of the register, and all such other registers and books as may be required by the council of the said society, and may be necessary for giving effect to the bye-laws of the said society, and to the provisions of this Act.

VI. All

All members, associates, &c., of the society, at the passing of this Act, entitled to be registered.

VI. All such persons as shall at the time of the passing of this Act be members, associates, apprentices, or students of the said Pharmaceutical Society of Great Britain, *according to the terms of the said charter of incorporation*, shall be registered as pharmaceutical chemists, assistants, and apprentices or students respectively.

Registrar bound to certify, &c., and his certificate good evidence in absence of the contrary.

VII. The registrar to be appointed under or by virtue of this Act shall be bound, on the application of any person paying one shilling, to certify under his hand whether or no any person whose name and address shall be furnished to him appears in the said register, or is a member of the Pharmaceutical Society of Great Britain or not; and the certificate of such registrar, signed by the said registrar, and countersigned by the president or two members of the council of the said society, shall, in the absence of evidence to the contrary, be sufficient evidence of the facts therein stated up to the date of the said certificate.

Persons appointed under charter or bye-laws, or this Act, to conduct examinations.

VIII. All such persons as shall from time to time be appointed under or in pursuance of the said Charter of Incorporation, or the bye-laws thereof, or under this Act, shall be and the same are hereby declared to be fit and proper persons to conduct all such examinations as are provided for or contemplated by this Act, and shall respectively have full power and authority, and are hereby authorised and empowered to examine all persons who shall present themselves for examination under the provisions of this Act in their knowledge of the Latin language, in botany, in materia medica, and in pharmaceutical and general chemistry, and such other subjects as may from time to time be determined by any bye-law; Provided always, that such examinations shall not include the theory and practice of medicine, surgery, or midwifery; and the said examiners are hereby empowered to grant or refuse to such persons, as in their discretion may seem fit, certificates of competent skill and knowledge and qualification to exercise the business or calling of pharmaceutical chemists, or, as the case may require, to be engaged or employed as students, apprentices, or assistants respectively.

Power to examiners to grant certificates.

Examiners to be appointed for Scotland.

IX. And to enable the said society to provide for the examination in Scotland of such students, apprentices, or assistants in Scotland as may desire to be examined there, it shall be lawful for the council of the society, and they are hereby required, to appoint such fit and proper persons in Scotland, to meet in Edinburgh or Glasgow, or such other place or places as the council may think desirable, and to conduct there all such examinations as are provided for and contemplated by this Act, with such and the like powers and authorities in respect thereof as are herein conferred, and to grant to the persons to be so examined such and the like certificates as are hereinbefore specified and referred to, or to refuse the same; and all the provisions of this Act shall be equally applicable to the examiners, examinations, and parties examined in Scotland as to the examiners, examinations, and parties examined in England.

Persons who have obtained certificates entitled to be registered;

Persons registered as pharmaceutical chemists eligible to be members;

Eligibility of persons registered as assistants, &c.

X. Every such person who shall have been examined by the persons appointed as aforesaid, and shall have obtained a certificate of qualification from them, shall be entitled to be registered by the registrar according to the provisions of this Act, upon payment of such fee or fees as shall be fixed by the bye-laws; and every person duly registered as a pharmaceutical chemist shall be eligible to be elected as a member of the said society; and every such person duly registered as an assistant shall be eligible for admission as an associate of the said society; and every such person duly registered as a student or apprentice to a pharmaceutical chemist shall be eligible for admission into the said society, according to the bye-laws thereof.

Exceptions.

Medical.

XI. That no person who is a member of the medical profession, or who is practising under right of a degree of any university, or under a diploma or license of a medical or surgical corporate body, shall be entitled to be registered under this Act; and if any registered pharmaceutical chemist shall obtain such diploma or license, his name shall not be retained on the said register during the time that he is engaged in practice as aforesaid.

Persons not duly registered shall not assume or use name or title of pharmaceutical chemist, or any name, title or sign implying the same.

Penalty on persons offending.

XII. From and after the passing of this Act, it shall not be lawful for any person, not being duly registered as a pharmaceutical chemist according to the provisions of this Act to assume or use the title of pharmaceutical chemist or pharmaceutist in any part of Great Britain, or to assume, use, or exhibit any name, title, or sign implying that he is registered under this Act, or that he is a member of the said society: and if any person, not being duly registered under this Act, shall assume or use the title of pharmaceutical chemist or pharmaceutist, or shall use, assume, or exhibit any name, title or sign implying that he is a person registered under this Act, or that he is a member of the said society, every such person shall be liable to a penalty of five pounds; and such penalty may be recovered by the registrar to be appointed under this Act, in the name and by the authority of the council of the said society, in manner following (that is to say):

Penalties, how recoverable in England and Wales.

In England or Wales, by plaint under the provisions of any Act in force for the more easy recovery of small debts and demands:

In Scotland.

In Scotland, by action before the Court of Session in ordinary form, or by summary action before the sheriff of the county, or in the royal burgh before the magistrates of the burghs where the offence may be committed or the offender resides, who, upon proof of the offence or offences either by confession of the party offending or by the oath or affirmation of one or more credible witnesses, shall convict the offender, and find him liable in the penalty or penalties aforesaid, as also in expenses; and it shall be lawful for the sheriff or magistrate, in pronouncing such judgment for the penalty

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or penalties and costs, to insert in such judgment a warrant, in the event of such penalty or penalties and costs not being paid, to levy and recover the amount of the same by poinding:

Provided always, that it shall be lawful to the sheriff or magistrate, in the event of his dismissing the action and assoilzising the defender, to find the complainer liable in expenses; and any judgment so to be pronounced by the sheriff or magistrate in such summary application shall be final and conclusive, and not subject to review, by advocation, suspension, reduction, or otherwise.

Limitation for recovery of penalties, &c.

XIII. Provided always, that no action or other proceeding for any offence under this Act shall be brought after the expiration of six months from the commission of such offence; and in every such action or proceeding the party who shall prevail shall recover his full costs of suit or of such other proceedings.

Application of penalties.

XIV. All and every sums and sum of money which shall arise from any conviction and recovery of penalties for offences incurred under this Act shall be paid as the Commissioners of Her Majesty's Treasury shall direct.

Registrar falsifying register, &c., guilty of a misdemeanor.

XV. If any registrar under this Act shall wilfully make or cause to be made any falsification in any matters relating to any register or certificate as aforesaid, every such offender shall be deemed guilty of a misdemeanor.

Any person wilfully procuring false certificate guilty of a misdemeanor.

XVI. If any person shall wilfully procure by any false or fraudulent means a certificate purporting to be a certificate of registration under this Act, or shall fraudulently exhibit a certificate purporting to be a certificate of membership of the Pharmaceutical Society every such person so offending shall be adjudged guilty of a misdemeanor.

Bye-Laws of the Pharmaceutical Society of Great Britain.

Section I.—Members' Qualification, Elections, and Subscriptions.

1. Persons who have respectively become members, associates, and apprentices or students of the society, pursuant to the Charter of Incorporation, the Act of Parliament, 15th and 16th Victoria, cap. 56, and the bye-laws which have heretofore from time to time been in force, shall continue to be members, associates, and apprentices or students respectively, subject to the bye-laws in force for the time being.

2. Persons qualified to be elected members, associates or apprentices or students of the society, shall at a meeting of the council be proposed and seconded by members of the council. The qualification of the proposed member, associate, or apprentice or student, shall be stated in a written resolution, which, when proposed and seconded, shall be submitted to the council, and when passed, shall confer the right of becoming a member, associate, or apprentice or student.

3. Persons registered as pharmaceutical chemists under section 10 of the said Act of Parliament, and desirous of becoming members of the society, shall make application to the council in that behalf.

4. Pharmaceutical chemists being superintendents of pharmaceutical establishments engaged in the confidential management and control of the business of a chemist and druggist, and desirous of becoming members of the society, shall make application in writing, stating the grounds on which they apply. Their names shall be exhibited in the library of the society for one calendar month after application, and if, upon due inquiry made, the grounds of application shall be found sufficient, they shall be elected members on production of certificates of qualification satisfactory to the council.

5. Associates of the society, who became such before the 1st day of July, 1842, shall be elected members on the production of certificates of qualification satisfactory to the council; and no other person whose name has not previously been inserted in the register of pharmaceutical chemists, under section 10 of the said Act, shall be elected a member.

6. Persons registered as assistants under section 10 of the said Act of Parliament, and desirous of becoming associates of the society, shall make application to the council in that behalf.

7. Persons registered as apprentices or students under section 10 of the said Act of Parliament shall be eligible for admission as apprentices or students of the society, and, if desirous of being admitted accordingly, shall make application to the council on that behalf.

8. All persons on election as members, associates, or apprentices or students, shall sign a written declaration, stating their full names and addresses, and their willingness to comply with the regulations of the society.

9. All persons who have become life members of the society pursuant to bye-laws, which have heretofore from time to time been in force, shall be exempt from further contributions to the funds of the society.

10. All members of the society, except life members, shall pay an annual subscription of one guinea.

11. All associates and apprentices or students of the society shall pay an annual subscription of half-a-guinea.

12. All

12. All persons who, prior to the 1st day of October, 1862, shall have become associates, apprentices, or students, after examination, and who shall have paid their examination fees pursuant to the bye-laws then in force, shall be exempt from annual subscriptions to the funds of the society, as associates, apprentices, or students.

13. All subscriptions for the current year shall become due upon election, and all annual subscriptions shall become due on the 1st day of January in every year, and if any member, associate, or apprentice or student, shall not have paid his annual subscription before the 1st day of May in any year his name shall be omitted from the register of members, associates, and apprentices or students of the society, certified by the council at the annual meeting. It shall be competent to the council to restore any defaulter to his former status in the society on payment of his arrears and any fine which it may be thought fit by the council to impose, not exceeding half-a-guinea.

14. All persons who, before the 1st day of October, 1862, shall have paid fees on, and passed the major examination, and who, by reason of registration as pharmaceutical chemists under the said Act of Parliament, qualify themselves to be elected members of the society, shall upon election to membership, have the option of becoming life members exempt from further contribution on payment of a life subscription of five guineas.

15. All members of the society, other than those mentioned in the last preceding bye-law, shall have the option of becoming life members exempt from further contribution on payment of a life subscription of twenty guineas.

Section II.—Honorary and Corresponding Members.

1. The council shall at their discretion elect as honorary and corresponding members of the society such scientific men as have distinguished themselves in any of the branches of knowledge embraced in the educational objects of the society.

2. The name of each person proposed for election as an honorary or corresponding member of the society must be exhibited in the Library for one calendar month, prior to his election; and the party so proposed must be balloted for at the first meeting of the council next after the expiration of the month.

Section III.—Common Seal.

1. The common seal of the Pharmaceutical Society of Great Britain shall consist of the armorial bearings, crest, and motto registered in Her Majesty's College of Arms.

2. The said seal shall be deposited at the house of the society, in a box having a lock and two keys, one of which shall be in the custody of the president, and the other in that of the vice-president.

3. The common seal shall not be set or affixed to any deed, instrument, or writing whatsoever, unless in the presence of the council of the society, and in pursuance of an order or minute entered in their books.

Section IV.—Bye-law.

The making, altering, or abrogating any bye-law shall be in the following manner:—

1. A written formula for any proposed bye-law, or for altering or abrogating any bye-law, being delivered by a member of the council to the chairman, shall thereupon be read, and, if seconded and approved, shall be referred to the next meeting of the council for confirmation, and be subsequently dealt with according to the provisions of the 15th and 16th Vict. c. 56, and the Royal Charter of Incorporation.

2. A copy of the bye-laws shall be given to every member of the society on his applying for the same.

Section V.—Election of Council and Auditors.

1. Two-thirds of the members of the council shall go out of office in every succeeding year, and the members so retiring shall be those who have been longest in office, computing from their last election. If upon any such retirement more than one-third of the members of the council shall have been in office for the same period, the other retiring members shall be determined by lot.

2. The retiring members of the council shall be ascertained and determined at the monthly meeting held in February of every year, and the names shall be advertised on or before the 10th day of March in every year.

3. Any member of the society desirous of nominating another member for election as a member of the council, or as an auditor, shall give notice in writing, with the name and address of the candidate, to the secretary of the society, on or before the 24th day of March in every year; and the secretary shall ascertain whether such candidate will accept office if elected.

4. The council shall, at their monthly meeting held in April of every year, prepare a list of all persons nominated for election and eligible to be elected members of the council and auditors for the ensuing year; and in default of the nomination of a sufficient number of persons willing to accept office, the council shall nominate as many as may be required to augment the number to 14 persons to be elected as members of council, and five as auditors. No nominations shall be received after the 24th day of March, except such as may be made by the council, in the manner and under the circumstances aforesaid, at the monthly meeting in April.

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5. The secretary shall issue to every member of the society residing in Great Britain, and qualified to vote, not less than 10 days prior to the meeting at which members of the council and auditors, or either of them, are to be elected, a voting paper for such elections or election. The names and residences of the candidates shall appear in such voting papers, and, with regard to voting papers for the election of the council, the names of the members who remain in office shall also appear.

6. It being enacted by the 15th and 16th Vict. c. 56, that members residing within five miles of the General Post Office, St. Martin's-le-Grand, London, shall vote personally, and that members residing beyond that distance may transmit their voting papers under cover to the secretary, at least five clear days prior to the date of election; the voting papers issued to the London and country members respectively shall be in the following forms, marked No. 1 and 2.

No. 1.—" London Members' Voting Paper, to be delivered personally on the day of Election, May , 18 ."

PHARMACEUTICAL SOCIETY of GREAT BRITAIN, 17, Bloomsbury-square.

For the Election of Fourteen Members of the Council.

CANDIDATES.

1*	_____	11*	_____
2	_____	12	_____
3	_____	13	_____
4	_____	14*	_____
5	_____	15*	_____
6*	_____	16*	_____
7	_____	17*	_____
8*	_____	18*	_____
9*	_____	19*	_____
10	_____	20*	_____

The names against which a star is prefixed are those who are members of the present council, and who are eligible for re-election.

Instructions for Voting.

Every member voting must erase the names of all the candidates for whom he does not intend to vote. If more than 14 names be left, the voting paper will be rejected.

The following are the members who remain on the council:—

PHARMACEUTICAL SOCIETY of GREAT BRITAIN, 17, Bloomsbury-square.

Voting Paper, May , 18 , for the Election of Five Auditors.

CANDIDATES.

1 _____
2 _____
3 _____
4 _____
5 _____
6 _____
7 _____

INSTRUCTIONS for VOTING.

Every member voting must erase the names of all the candidates for whom he does not intend to vote. If more than five names be left, the voting paper will be rejected.

No. 2.

No. 2.—" Country Members' Voting Paper to be delivered personally on the day of Election, May , 18 , or returned to the Secretary in the accompanying envelope on or before the day of May, 18 ."

PHARMACEUTICAL SOCIETY of GREAT BRITAIN, 17, Bloomsbury-square.

For the Election of Fourteen Members of the Council.

CANDIDATES.

1*	11*
2	12
3	13
4	14*
5	15*
6*	16*
7	17*
8*	18*
9*	19*
10	20*

The names against which a star is prefixed, are those who are members of the present council, and who are eligible for re-election.

INSTRUCTIONS for VOTING.

Every member voting must erase the names of all the candidates for whom he does not intend to vote. If more than 14 names be left, the voting paper will be rejected.

The voting paper after the erasure of names, if not intended to be delivered personally, must be folded up and enclosed in the accompanying envelope addressed to the secretary.

To prevent imposition, the member must sign his name and address on the line on the outside of the envelope.

The following are the members who remain on the council:—

PHARMACEUTICAL SOCIETY of GREAT BRITAIN, 17, Bloomsbury-square.

Voting Paper, May 18 , for the Election of Five Auditors.

CANDIDATES.

1
2
3
4
5
6
7

INSTRUCTIONS for VOTING.

Every member voting must erase the names of all the candidates for whom he does not intend to vote. If more than five names be left, the voting paper will be rejected.

This paper is not to be signed, but if not intended to be delivered personally, is to be folded up and enclosed in the envelope to the secretary by the post.

Form of Address, &c. on Envelope.

VOTING PAPER.

Member's signature

Member's address

To the Secretary of the Pharmaceutical Society,
17, Bloomsbury-square, London.

The voting paper must be returned to the secretary on or before the day of May 18 .

7. Before the votes are taken the members constituting the meeting shall appoint from among themselves four or more scrutineers, who shall ascertain the number of votes given for

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for each candidate, and make a return thereof to the chairman under their hands, and the chairman shall then declare the result of the election; and, in case of an equality of votes, shall give a second or casting vote. The voting papers to be delivered personally shall be received at the general meeting. The voting papers duly transmitted by absent members shall be opened by, or in the presence of the chairman.

8. The chairman at any meeting for the election of members of the council or auditors, shall have the power of adjourning such meeting from time to time, with a view to the reception of the report of the scrutineers, but no such adjournment shall extend beyond a period of four days.

Section VI.—Council.

1. The council shall meet at the society's house on the first Wednesday in every month at eleven o'clock in the forenoon. Seven members shall constitute a quorum, and without that number being present no business shall be transacted; before other business is entered on, the minutes of the preceding monthly and of any subsequent meeting or meetings shall be read.

2. All motions or proposals shall be written, together with the names of the mover and seconder, and upon being put shall be decided by a show of hands, except in cases of a ballot, which may be demanded by any member. Should the numbers be equal, the chairman shall have a second or casting vote. It shall be lawful for the chairman to postpone or adjourn to the next meeting any motion whereof notice in writing has not been given at a prior meeting.

3. All resolutions carried at the meetings of the council, except such as relate to the bye-laws, shall be acted upon without confirmation.

4. The council shall elect from among themselves a committee for general purposes, a committee of finance, a committee for the library, museum, and laboratory, and from time to time such other committees as may be necessary. The president and vice-president shall be *ex officio* members of all committees, and if present, one of them shall preside.

Section VII.—Committee for General Purposes.

1. This committee shall consist of not less than 12 members, four of whom shall constitute a quorum. The committee shall meet as often as may be required, and its proceedings shall be reported to the council.

Section VIII.—Committee of Finance.

1. This committee shall consist of not less than four members, two of whom shall constitute a quorum. The committee shall meet once or oftener in every month.

2. It shall be the duty of this committee to regulate and examine the accounts, to check the receipt of all monies, to examine all bills, and to present at the monthly meetings of the council such as shall have been approved for payment, with the signature of a quorum attached. This committee shall also prepare a balance sheet for the auditors previous to the annual meeting.

Section IX.—The Committee for the Library, Museum, and Laboratory.

1. This committee shall consist of not less than four members, two of whom shall constitute a quorum. The committee shall meet once in every month and report from time to time to the council.

2. It shall be the duty of this committee to superintend the arrangement and preservation of the books, specimens, and apparatus, to inspect the laboratory, and to make regulations for the admission of visitors and students to the library, museum, and laboratory.

Section X.—Examiners; Examinations; Fees.

1. The council of the society shall, at the first monthly meeting after the general meeting in every year, appoint two boards of examiners, one for England and Wales, and the other for Scotland.

2. The president and vice-president of the society shall, *ex officio*, be members of the boards of examiners, and shall preside at all meetings of such boards at which they shall be present.

3. The board for England and Wales shall consist of not less than six pharmaceutical chemists, exclusive of the president and vice-president of the society. The board for Scotland shall consist of not less than four pharmaceutical chemists, exclusive of the president and vice-president of the society. The council of the society may from time to time appoint professors of science to assist either of the boards of examiners at any of their examinations. Five members of the board of examiners for England and Wales, and three members of the board of examiners for Scotland, exclusive in each case of assistant professors, shall constitute a quorum.

4. The boards of examiners shall meet for the purpose of conducting examinations at such times during every month as the council of the society, at each monthly meeting, or at any special meeting, shall direct; and such boards respectively shall report the result of every examination to the council of the society at the monthly meeting immediately following the same.

5. The

5. The boards of examiners shall conduct all examinations according to such regulations as shall be made or adopted by them from time to time, and as shall have been approved by the council of the society. Such regulations shall from time to time be inserted in the published report of the transactions of the society. [Any alterations in the regulations of the board of examiners to be approved and confirmed by the council; and altered regulations must be published in the transactions.]

6. The council of the society shall from time to time supply any vacancy in the office of examiner, and may remove any member of the board of examiners, and substitute another person in his place, and may also from time to time appoint a special examiner, or special examiners, to conduct any such examination as to knowledge of the Latin language as mentioned in the next following bye-law.

7. The examinations shall be three in order or number. The first in order shall be an examination as to knowledge of the Latin language. The second in order shall be an examination as to knowledge of subjects connected with pharmaceutical chemistry, and shall be called the minor examination. The third in order shall be a more extended examination as to knowledge of the last-mentioned subjects, and shall be called the major examination.

8. The subjects of the minor and major examinations shall be translation and dispensing of prescriptions, pharmacy, general chemistry, the chemistry of poisons, posology, materia medica, and botany.

9. All persons before registration as apprentices or students shall pass an examination as to knowledge of the Latin language, and shall pay a fee of two guineas, whereupon they shall be registered under the said Act of Parliament as apprentices or students.

10. All persons, before registration as assistants, shall pass the minor examination, and shall pay a fee of three guineas if previously registered as apprentices or students, or otherwise a fee of five guineas, whereupon they shall be registered under the said Act of Parliament as assistants.

11. All persons before registration as pharmaceutical chemists shall pass the major examination, and shall pay a fee of five guineas if previously registered as assistants, or otherwise a fee of ten guineas, whereupon they shall be registered under the said Act of Parliament as pharmaceutical chemists. [Persons failing to pass the examination, the fee is retained, but they are eligible to present themselves again without further payment. Those who fail to pass the special examination (chemists and druggists in business) have the fee returned, less 21*s.*, which is permanently retained. Minutes of Council, 2 November, 1864.]

12. No person shall be admitted to the major examination who shall not have attained the age of 21 years.

Section XI.—Registrar and Registrations.

1. The registrar shall receive and preserve all cards or tickets issued by the examiners signifying that examinations have been passed.

2. The registrar shall from time to time make out and maintain a register of all persons being respectively members, associates, and apprentices or students of the society, and a register of all persons entitled to be registered under the said Act of Parliament with proper indices of such registers respectively.

3. The names of persons registered as apprentices or students of the society shall, upon their election as associates, be removed from the registrar of apprentices or students, and placed upon the register of associates.

4. The names of persons registered as apprentices or students, or as associates of the society shall, upon their election as members be removed from the register of apprentices or students, or the register of associates, as the case may be, and be placed upon the register of members.

5. The names of persons registered as apprentices or students under the said Act of Parliament shall, upon their being registered as assistants, be removed from the register of apprentices or students.

6. The names of persons registered as apprentices or students, or as assistants under the said Act of Parliament shall, upon their registration as pharmaceutical chemists, be removed from the register of apprentices or students, or the register of assistants, as the case may be.

7. All the said registers shall be revised annually, and laid before the annual general meeting of the society.

8. Persons who have not been examined under the said Act of Parliament who have been registered as pharmaceutical chemists by reason of their election as members of the society, and who have not paid life subscriptions, shall pay the annual subscription required from members; and the names of all such members as last mentioned who fail to pay their annual subscription before the 1st day of May in any year, shall be omitted from the register of pharmaceutical chemists.

Section XII.—Treasurer.

1. It shall be the duty of the treasurer to receive all monies, to pay such accounts as the council may order by the signature of six members of the council in council assembled, and to render his account at each monthly meeting.

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Section XIII.—Secretary.

1. The secretary shall have authority over the servants of the establishment, whose wages he shall pay. He shall be in attendance at his office from 9·30 a.m. to 5 p.m. every day, except Saturday, and be present at all meetings of the council and committees, general and special meetings, and also at the evening meetings and lectures. It shall be his duty to superintend the affairs of the society under the direction of the council and committees. He shall keep the books of the society in a neat and orderly manner, shall conduct the correspondence, and issue all the summonses, take the minutes of all meetings for business, and read them, and make a report of all matters that come under his cognizance for the information of the council and committees. He shall consult the president or vice-president on any business requiring attention, between the various meetings, and be responsible for the safe custody of all the documents and property belonging to the society which shall be under his control.

2. He shall find security in the sum of 300 *l.*, and shall receive all subscriptions, fees, and donations, and give a printed receipt for the same, and no other, checking each receipt. He shall every Saturday transact any business of the society that may be required out of doors, and pay to the treasurer the amount of monies received by him during the week. He shall receive such a sum in advance for petty cash and servant's wages as the council may order, and account for the same to the finance committee, but shall not out of such sum pay any account exceeding 40 *s.* He shall also superintend the transmission of the transactions.

Section XIV.—Auditors.

The auditors shall meet at least one month previous to the annual meeting; it shall be their duty to inspect the accounts of the society, and the balance sheet prepared for them by the finance committee, which must be certified and signed by them, and be presented to the council at their meeting in May.

Section XV.—Summonses.

For all Meetings of the Council, Committees, or Auditors.

1. Printed summonses shall be issued by the secretary, with his name attached, and if left at the place of business, or transmitted by post, addressed to the place of business or residence of the person summoned, shall be considered as received.

2. All summonses shall be issued at least three clear days previous to the meetings, inclusive of the day of issuing the same, except in the case of special meetings; and all notices of motion shall be inserted therein, and also notice of such matters as require particular consideration, including the names of persons who are proposed for election as honorary or corresponding members or superintendents.

3. The secretary shall issue summonses, notices, or advertisements convening all special council or general meetings; if for the latter, not less than 10 clear days' previous notice shall be given; and such summonses, notices, or advertisements shall contain full notice of the business to be discussed at the special meeting.

4. Cards of invitation to the pharmaceutical meetings and evening lectures shall be issued by the secretary in the name of the council, to such persons as the council may direct; and each member of the society may, on application to the secretary, obtain a card for the admission of a friend, to which his own signature must be attached.

Section XVI.—Filling up Vacancies by Death, Resignation, or Removal.

1. In the event of any vacancy occurring in the office of president, vice-president, or treasurer, the secretary shall report the same, and the cause thereof in the summons for the next meeting of the council, who shall thereupon find and declare such vacancy, and immediately proceed to elect from their remaining number a proper person to fill such vacant office.

2. In the event of any vacancy occurring in the council or auditors, or in the several committees during the current year, the secretary shall report such vacancy, and the cause thereof, in the summons for the next meeting of the council, at which some member of the council, or of the society, as the case may require, shall be nominated to fill up such vacancy.

3. In the event of a vacancy occurring in the office of secretary, the president or vice president shall appoint some person, *pro tempore*, to fulfil the duty of the office, and in the summons for the next meeting of the council the vacancy shall be declared; and some person or persons being proposed and seconded at such meeting, the election shall take place, but shall not be final, unless confirmed at the next meeting of the council.

Section XVII.—Removal of Officers and Members.

1. Every member of council who shall commit any act or acts which appear to the council derogatory to the honour of his office, shall give an explanation of the same to the council, on being required so to do, and in default thereof, or if such explanation be unsatisfactory to the members present, he shall be liable to the censure of the council, or, if it be deemed expedient, a notice may be given by any member of the council, for a motion of removal from the society of the member so offending, which notice shall be inserted in the summons for the ensuing meetings of the council until disposed of, and shall be taken into consideration at the first ensuing meeting of the council at which 12 members thereof shall be present.

2. If any report be made to the council by a member of the society in writing, with his name attached, that another member has been guilty of any act or conduct which, in the opinion of the council is contrary to or subversive of the interests of the society, or a violation of its laws and regulations, the secretary shall write to the member so accused, for an explanation, and in default of explanation, or if the same be unsatisfactory, two members of the council shall be deputed to communicate, personally or by letter, with such member, and shall report the result to the council; when any member of the council shall, if he think it expedient, give notice of a motion for the removal of such member from the society. This notice must be inserted in the summons for the ensuing meetings of the council, until disposed of, and be taken into consideration at the first meeting thereof at which 12 members are present.

3. Any member desiring to retire from the society, shall send notice thereof to the secretary in writing, together with the diploma of membership. No member shall be released from his obligation to pay his annual subscription until such time as the diploma of membership shall have been returned.

Section XVIII.—Funds and Property.

1. The council of the society shall from time to time cause such part of the funds in the hands of the treasurer as may not, in their judgment, be required for carrying on the business of the society, to be invested in Government or real securities in the corporate name of the society.

2. All property belonging to the society now held, laid out, or invested by or in the names of trustees, and including both the general and the benevolent funds, shall be conveyed, assigned, and transferred, so as to become vested in the society in its corporate name and capacity.

3. The property and funds of the society, other than monies from time to time in the hands of the treasurer or secretary, shall not be disposed of or otherwise dealt with except in pursuance of an order of the council of the society, signed by six members at the least, in council assembled.

Section XIX.—Benevolent Fund.

1. The benevolent fund shall consist of donations and subscriptions towards the particular objects of such fund, in addition to the sum already invested in respect of the same fund.

2. Donations in aid of the benevolent fund shall be invested in Government or real securities; and no part of the invested capital of such fund shall be distributed among the recipients of relief.

3. The interest to accrue from the invested portion of the benevolent fund, together with annual subscriptions in aid thereof, shall be applicable, at the discretion of the council, towards the relief of distressed members or associates of the society, and their widows and orphans respectively; and any unapplied surplus shall be annually added to the invested capital of the same fund.

4. Persons eligible for relief from the benevolent fund shall be such necessitous members or associates of the society whose connection with the society shall be of not less than four years' date, and such widows and orphans of members or associates as shall be in necessitous circumstances.

Section XX.—Annual and Special General Meetings.

1. The council shall prepare a report of their proceedings during the past year, together with a statement of the funds, which shall be read at the annual general meeting, and inserted in the published report of the transactions of the society.

2. The council shall meet previous to the general meeting, and arrange the business to be transacted thereat; and the proceedings of the general meeting shall be considered perfect in themselves without the necessity of reading or confirming the minutes of the preceding annual meeting.

3. No business shall be brought forward at any special general meeting but that for which it is convened, and of which due notice has been given to the members of the society, pursuant to the preceding bye-law, No. 3, under sec. 15.

App. No. 1.

Section XXI.—Diploma and Certificates.

1. Every member of the society shall, upon payment of his subscription, be entitled to a diploma of membership in such form as shall from time to time be determined upon by the council.

2. Persons registered as pharmaceutical chemists under sec. 10, 15th and 16th Vict. c. 56, on being duly elected members of the society, shall be entitled to a diploma of membership with the seal of the society.

3. All persons examined pursuant to the said Act of Parliament and the foregoing bye-laws, shall, after having passed their examinations and paid their examination fees, receive certificates in such form as shall from time to time be determined upon by the council.

4. All plates used from time to time for printing the forms of the said diploma and certificates shall be deposited at the house of the society, in a box having a lock and two keys, one of which shall be in the custody of the president and the other in that of the vice-president.

5. No print shall be taken from the said plates, or any or either of them, without an express order of the council. All prints taken shall be in the custody of the secretary, but no print shall be filled up without an express order of the council, which order, with regard to certificates, shall from time to time be made, on the receipt of reports from the Board of Examiners.

6. Every diploma shall be signed by the president and vice-president, and countersigned by the secretary. Every certificate shall be signed by the Board of Examiners, or those members thereof who conducted the examination to which each certificate relates, or by the chairman on behalf of those present. [Resolved in council, 2d November 1864,—That persons passing the examinations under the resolution of council in July 1864, shall not receive the usual certificate signed by the Board.]

7. Every person ceasing to be a member of the society shall forthwith deliver up to such person as the council shall order the diploma of membership furnished to him pursuant to the preceding bye-laws.

8. All persons pirating or imitating the diploma, or any or either of the certificates, or the common seal of the society, or falsely holding themselves forth to the public by means of advertisements, hand-bills, labels, circulars, or otherwise, as members of the society, or registered under the said Act of Parliament, shall be subject to such legal proceedings as the council shall from time to time order.

Section XXII.—Journal and Transactions.

1. The "Pharmaceutical Journal" (the copyright of which now belongs to the society) shall be edited, printed and published in such manner as the council shall from time to time direct.

2. The transactions of the society required by the preceding bye-laws to be published shall be inserted in the said journal, and all notices or advertisements shall be considered duly made or given if inserted therein.

Section XXIII.—Pharmaceutical Meetings.

1. Evening meetings may be held at the house of the society, as the council shall from time to time direct, for the reading of papers and discussion of subjects relating to the objects of the society.

2. Notice of such meetings shall be given in the "Pharmaceutical Journal" next preceding.

3. All communications intended to be made at such meetings shall be submitted to the president, or, in his absence, to the vice-president, or to the chairman of the meeting, for his sanction; and without such sanction no subject shall be introduced.

Form of Bequest to the General or Benevolent Fund.

"I give and bequeath the sum of unto the Pharmaceutical Society of Great Britain, the same to be paid out of my pure personal estate, and to be applied for the purposes of the General or Benevolent Fund of the said Society."

N.B.—Devises of land and bequests of money savouring of reality, or, in other words, connected in any way with land, will be void.

Appendix, No. 2.

PAPER handed in by Mr. *John Mackay*.

App. No. 2.

THE Pharmaceutical Society is established as an examining body; is liberal in its constitution; fees subject to bye-laws, sanctioned by the Secretary of State, and are capable of revision.

I agree in thinking fees should be reduced, Government control unnecessary, and I believe not required by the medical bodies.

Our Boards for examination are not imperatively members of our body, but have been practically so since we have had a well-formed Board. In the early days of our examinations in Edinburgh we were assisted by outside scientific men—teachers of chemistry—whose assistance could still be had if required. I am therefore opposed to a Government assessor. On this subject I refer to my evidence in 1852.

We are bound to examine every candidate, and do so without regard to the manner in which he has obtained his knowledge. On passing the *major* he is at once placed on the Pharmaceutical Register. His afterwards becoming a member depends upon his wish and the Society's election.

The law of *Caveat emptor* I conceive to be insufficient.

No objection to clause 7.

Schedule of dangerous drugs and poisons desirable as a protection to the public, and the sale of those should be confined entirely to registered chemists and druggists.

Increased education the true basis of protection to the public.

No objection to clause 9.

I have reason to believe that the Pharmaceutical Society are quite determined not to cede the title of Pharmaceutical Chemist to those not now entitled to registration.

I think the Society would not be true to its educational objects, nor to the expressed wishes of the medical bodies, as contained in their resolutions, if it permitted the test for the pharmaceutical title to be lowered.

John Mackay.

Appendix, No. 3.

App. No. 3. **French Schedule of Drugs and Medicines of which the Sale is prohibited, except by certain persons under certain regulations, 8 July 1850.**

19 separate Articles.

1. Prussic Acid.
2. Vegetable Alkaloids and Salts.
3. Arsenic, and its preparations.
4. Belladonna, Extract and Tincture.
5. Cantharides.
6. Chloroform.
7. Hemlock, Extract and Tincture.
8. Cyanide of Mercury.
9. Cyanide of Potassium.
10. Digitalis, Extract and Tincture.
11. Tartar Emetic.
12. Nicotianine (Poison of Tobacco).
13. Volatile Oil of Tobacco.
14. Nitrate of Mercury.
15. Opium and Extracts.
16. Phosphorus.
17. Ergot of Rye.
18. Stramonium, Extract and Tincture.
19. Corrosive Sublimate.

Articles to be kept under lock and key.

Proposed Schedule of Drugs and Medicines for *England*.

15 separate Articles.

1. Arsenic.
2. Corrosive Sublimate.
3. Vegetable poisonous Alkaloids and their Salts.
4. Prussic Acid.
5. Essential Oil of Bitter Almonds.
6. Chloroform.
7. Oxalic Acid and Salt of Sorrel.
8. Nux Vomica.
9. Tincture of Aconite.
10. Tincture of Colchicum.
11. Cantharides.
12. Coculus Indicus.
13. Cyanide of Potassium.
14. Opium and Laudanum.
15. Nitrobenzole.

It is suggested for the safety of the public:—

1. That any of these articles kept in shops should be kept apart from other drugs and medicines.

2. That they should be sold only by persons who know what they are selling, and are able to distinguish arsenic from white sugar, laudanum from tincture of rhubarb, and prussic acid from distilled water.

3. That some restrictions should be placed on their sale, and then put in a mitigated form, when for commerce or the arts or domestic purposes they are in great demand, *e.g.* in reference to the articles in red ink.

4. Many more articles might be introduced, but that would be considered too great an interference with trade; some might be omitted, and thus the facilities now existing for destroying life by accident or design might be maintained.

SPECIAL REPORT

FROM THE

SELECT COMMITTEE

ON THE

CHEMISTS AND DRUGGISTS BILL,

AND

CHEMISTS AND DRUGGISTS (No. 2) BILL

TOGETHER WITH THE

PROCEEDINGS OF THE COMMITTEE,

MINUTES OF EVIDENCE,

AND APPENDIX.

Ordered, by The House of Commons, *to be Printed,*
19 *June* 1865.

[*Price* 10 *d.*]

381.

Under 12 *oz.*

MINUTES OF EVIDENCE

TAKEN BEFORE THE

SELECT COMMITTEE

ON THE

COURTS OF JUSTICE CONCENTRATION (SITE) BILL;

WITH THE

PROCEEDINGS OF THE COMMITTEE.

Ordered, by The House of Commons, *to be Printed,*
14 *March* 1865

Jovis, 23° *die Februarii*, 1865.

Courts of Justice Concentration (Site) Bill, read 2°, and committed to a Select Committee.

Veneris, 24° *die Februarii*, 1865.

Committee nominated of,—

Mr. Cowper.	Mr. Crawford
Mr. Selwyn.	Mr. Murray.

Added by the Committee of Selection,—

Mr. E. P. Bouverie.	Mr. Gaskell.
Mr. H. B. Baring.	

Ordered, That the following Petitions for compensation be referred to the Committee:—

1. Rev. Thomas Rochford Redwar.
2. Rev. Richard Henry Killick.

Martis, 28° *die Februarii*, 1865.

Ordered, That the Petition of the Rev. Edward Auriol, for Compensation, be referred to the Committee.

Lunæ, 13° *die Martii*, 1865.

Ordered, That the Committee have Power to send for Persons, Papers and Records.

Ordered, That Three be the Quorum of the Committee.

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PROCEEDINGS OF THE COMMITTEE.

Martis, 14° *die Martii*, 1865.

MEMBERS PRESENT:

Mr. Cowper.
Mr. Murray.
Mr. Selwyn.

Mr. COWPER called to the Chair.

COURTS OF JUSTICE CONCENTRATION (SITE) BILL.

Parties appeared in support of the Bill.

Messrs. *Pritt & Co.*, Agents.

Petitions against, read, from—

1. Metropolitan Board of Works.
   No parties appeared in support thereof.
2. Rev. T. R. Redwar.
   No parties appeared in support thereof.
3. Rev. R. H. Killick.
   No parties appeared in support thereof.

Parties heard in support of the Bill.

Report of Commissioners put in.

James Pennethorne examined.

Preamble of the Bill read.

Question, That the Preamble of the Bill is proved—put, and agreed to.

The Committee went through the clauses of the Bill, and made amendments thereunto. MSS. clauses brought up, read 1°, 2°, and added to the Bill.

Henry Cadogan, *John Child*, Dr. *Johnson*, and *William Hammond*, were severally examined. Several MS. clauses brought up, read 1°, 2°, and added to the Bill.

Resolved to Report the Bill as amended, together with the Minutes of Evidence, to the House.

Ordered to Report.

LIST OF WITNESSES.

Martis, 14° *die Martii*, 1865.

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MINUTES OF EVIDENCE.

Martis, 14° *die Martii*, 1865.

MEMBERS PRESENT:

Mr. Cowper.
Mr. Murray.
Mr. Selwyn.

THE RIGHT HON. W. COWPER, IN THE CHAIR.

JAMES PENNETHORNE, Esq. called in; and Examined.

J. Pennethorne, Esq.

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1. YOU are Architect to Her Majesty's Board of Works and Public Buildings?—Yes.

2. Have you made a careful survey and estimate, in detail, of the property proposed as the site for the Courts of Justice?—Yes.

3. As shown upon the deposited plans?—Yes.

4. Is that a copy of the deposited plan?—This is a copy of the deposited plan (*handing in the same*).

5. I believe that includes all, and a little more than that plan which is appended to the evidence of the report of the Commissioners?—It includes all, and a little more.

6. It is intended to carry out that plan generally?—Yes.

7. The boundaries on the north, I believe, are Horse Shoe-court, Yeate's-court, and Carey-street?—Yes.

8. What is the boundary on the east?—Bell-yard.

9. Are the boundaries on the south the Strand and Pickett-street?—Yes.

10. What are the boundaries on the west?—Clement's Inn.

11. I believe it occupies an area of about 7½ acres?—Yes.

12. It is situate in the parish of St. Clement Danes, is it not?—Yes; partly in the parish of St. Clement Danes, partly in the Liberty of the Rolls, and partly in the parish of St. Dunstan in the West.

13. The number of streets, ways, and courts, taken wholly, is 25?—Yes.

14. The number of streets, ways, and courts, partly taken, is in number eight?—Yes.

15. Dwelling houses, chambers, and lodging houses, 343?—Yes.

16. Of which about half are of a fair character, and half of an inferior description?—Yes; about that.

17. Some, I believe, are in a very bad condition?—Some of the houses are very old indeed, and some of them have been rebuilt.

18. I believe the greater part of the locality is at present very ill drained?—They are close courts, and there is no good drainage.

19. No ventilation?—No.

20. I believe there is a great deal of fever constantly among the inhabitants?—According to the information I have obtained, that is so.

21. I believe you are familiar with most parts of London?—Yes.

22. Do you think that there are few parts of London worse, in a sanitary point of view, than that?—I have known most of the bad properties in London, and I do not know that I have met with any worse than some parts of this; some parts of this are very bad, and other parts are not so bad.

23. I believe many of them are the resort of prostitutes and bad characters?—Exactly.

24. Do you think the removal of so bad a neighbourhood from the centre of London would, in itself, be a great advantage?—I think that it would be a very great public benefit to clear the site.

25. Do you think that the area which is to be obtained under the powers to be granted by this Bill is sufficient for the construction of the building, the wants of which you are acquainted with, for the concentration of the Courts of Justice?—I believe that it is sufficient, but that it is not too much.

26. Mr. *Murray.*] You say that 7½ acres will be sufficient, but not too much?—Yes.

27. Have you any description of the courts you intend to build on this 7½ acres?—Yes; I have not got it with me, but I was furnished with the particulars of what would be required, and upon those particulars being furnished to me, I made a general plan, to enable me to ascertain the fact, whether or not the ground would meet the demand.

28. Of course you include all the superior courts?—Yes.

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29. Are any of the inferior courts included?—Yes; the Probate Court, with all its offices, the Admiralty, the Court for the Master of the Rolls, and in fact all the courts.

30. Do you include any other courts?—Three Courts for the Court of Common Pleas, three Courts for the Court of Queen's Bench, and three Courts for the Court of Exchequer. Then there is the Lord Chancellor's Court, the Lords Justices' Court, and three Courts for the three Vice-Chancellors, which I think complete the number.

31. With corresponding offices for the convenience of all these Courts?—Yes.

32. Will there be any spare land after the erection of these Courts?—No.

33. Mr. *Selwyn.*] What is the total area that you propose to take?—About 7½ acres.

34. How many houses are there in all?—Three hundred and forty-three.

35. Does that include what you have described in one return as houses of the labouring people, as well as houses of every description?—It includes every house upon the site.

36. Three hundred and forty-three in all?—Three hundred and forty-three dwelling houses. Besides that, there are warehouses and stables, and some printing-offices, but the number of dwelling houses is 343.

37. What is the total number of buildings, including the warehouses, stables, and other buildings, which you refer to?—I believe the total number of buildings is rather above 400.

38. You do not know the exact number?—I have not got it with me, I think it is 401; I do not know the exact number at this moment.

39. As I understand, a great many of these houses are let out to different occupiers in flats or apartments?—Many of them are lodging houses.

40. But some of them are let out in flats, apartments, or chambers, are they not?—Exactly. There are a great many houses which are let out in chambers.

41. They are not lodging houses, but separate holdings?—Exactly; in Carey-street, Serle's-place, and New Boswell-court, there are a great many lawyers' chambers.

42. Do you know how many separate holdings there are, including householders, holders of chambers, and holders of separate apartments?—I have not counted them up, but I could do so, because they are all in the Book of Reference.

43. About how many would there be?—I should scarcely like to say, because I have not made the calculation.

44. You have not made the calculation then for the estimate of what it will cost, I suppose?—Yes.

45. Is not the number of persons to whom you have got to pay compensation, a very material ingredient in that calculation?—We have got the number; they are all stated by name in the Book of Reference, but, as I have not counted them up, I cannot tell offhand.

46. When you made the estimate, did you take each calculation?—Yes, each one.

47. Then you must have added up those numbers?—I have not cast up the numbers. I have the names of every person interested in the property.

48. But you do not know how many there are?—No.

49. Now with respect to the site; you propose to make roads all round this building, I presume?—Yes.

50. Can you state the width of the roads?—Of course, when I say it is intended to do this sort of thing, it is a mere suggestion; there is no plan made or approved of yet; but what I contemplated was to make Bell-yard a street not less anywhere than 52 feet wide; and Carey-street the same.

51. What is the width of Bell-yard now?—It is very narrow.

52. About 5 or 10 feet, is it not?—That is the least; in some parts it is a great deal more; and in some parts it is about that. Bell-yard is approached by a gateway, 10 feet wide and 40 feet long.

53. You propose to enlarge that into a road, at its narrowest part 52 feet wide?—Yes. Carey-street would also be widened, so as not to be less than 52 feet wide.

54. Fifty-two feet wide, including the footpaths?—Including the footpaths, from area railing to area railing; then from Pickett-street up to Carey-street there would be a street taken due south, which would be also 52 feet wide.

55. Did you make any provision for the carriages and cabs which would come there, when there is this concentration of the Courts of Justice?—I should think the streets all round it would be quite sufficient.

56. You do not propose to do anything with those streets?—No.

57. What would be the total area occupied by the streets out of those 7½ acres which you have described?—The size of the great building is about 4½ acres, and the smaller one is about an acre. I think the street that goes from Pickett-street to Carey-street divides it into two blocks; one block of the building will be about 4½ acres, and the other block will be about one acre.

58. With a street running between them?—Yes.

59. Will you just show me that upon the plan; I thought they were to be all under one roof?—For the purpose of making a communication from north to south, it is proposed to take a street direct from Foregate in Pickett street up to Carey-street; the consequence is, that it makes this to the east the square block of 4½ acres, and leaves that piece (*referring to the Plan*) of about one acre, which would, in all probability, be applicable to the Probate Court.

60. Then what is to be the width of the street running northwards from Pickett-street?—Fifty-two feet.

61. That would be taking the whole of the space now covered by houses?—Entirely.

62. That is to say, you would pull down the houses all the way for the purpose of forming that street?—Yes.

63. Then you would have 4½ acres to the east, and upon that you propose to accommodate all the Courts, and all the offices which you have mentioned?—Yes, except the Probate Court, which would be to the west.

64. Have you made any provision in any way for these poor people who are to be dispossessed?—None whatever.

65. Do you consider it to be of great advantage to dispossess them and to clear them out?—I do not expect that any damage will be done to any of them.

66. Are you aware of any place in the neighbourhood where such of them as carry on business connected with the law can find habitations?—I do

do not know that there are any great number who are connected with the law. To a certain extent there are some who will of course find lodgings in the neighbourhood around.

67. With respect to the number of Courts; you say there are to be three for each of the Superior Courts at Westminster?—That is the number according to the particulars given to me.

68. There is to be the Lord Chancellor's Court?—Yes.

69. The Lords Justices' Court?—Yes.

70. A Court for the Master of the Rolls?—Yes.

71. And three Courts for the three Vice-Chancellors?—Yes.

72. That makes 15?—Yes; and then there are the Admiralty Court and the Probate Court.

73. The Probate Court, you say, is to be on the west?—Yes.

74. How many do you intend to have on the 4½ acres?—That would be all on the 4½ acres.

75. I observe one Mr. Abram was examined on the 11th July 1861. He said that there were to be 21 Courts provided with 710 rooms, for which he calculated that a space of 617,500 superficial feet would be required?—He may have calculated the large rooms to be used for the examiners.

76. You do not propose to bring the Central Criminal Court there?—No.

77. Have you estimated what is required for each of these Courts?—The particulars required by each Court were furnished to me; the sizes of the Courts were given, the number of rooms attached to each of the different Courts, some being of one size, and some of another. All that information was given to me, and I have provided for them in the plan.

78. Can you tell me what would be the number of superficial feet in these 4½ acres that you have?—I make it 186,020 feet.

79. Mr. Abrams calculated 617,500 feet as being required for the extension of the Courts?—That is, most likely, counting five different floors. In addition to that there would be the Probate Court, which of course is included.

80. Then you must add the Probate Court to the other side. I was proposing to exclude that and to exclude the acre, and to deal for the present with these 4½ acres?—Then it would be 186,020 feet, and four storeys would be 744,080 feet.

81. You do not propose to put any of these Courts upstairs?—No; they would be all in the ground floor. That shows that such a calculation is not to be depended upon. It is impossible that you can calculate except you have the size and number of the rooms.

82. This calculation of Mr. Abrams, you say, cannot be depended upon?—In all probability that was given as the result of plans which had been made.

83. The Courts are intended to be on the ground floor?—All the Courts are intended to be on the ground floor.

84. Does that include the Examiner's-office and the Judges' rooms?—The Judges' rooms would be on the ground floor, and some of the Examiners' offices would be on the ground floor.

85. Do you intend to provide for the Judges a greater amount of accommodation than that which they possess at present?—In all probability that is so; but I have followed exactly the particulars that were furnished to me.

86. Do you know that at present the Lord Chancellor and the Lords Justices have between them eight rooms for their private accommodation?—Yes; I think that the particulars furnished to me gave more than that.

87. How many more do you intend to give?—I would have prepared myself upon these points if I had known I should have been examined upon them; I have not the particulars with me. The particulars that were furnished to me I returned again to the office, and I am not now in possession of them.

88. It appears to me that this plan, as I have heard it stated, includes a great many more things than were included in Mr. Abram's statement, which you say now is a calculation which cannot be relied upon?—I did not say that; I only say it is impossible to rely upon any calculation that is made from a superficial area, and it is most probable that Mr. Abram's statement was made from plans, and therefore it was taken according to the different rooms that were defined upon these plans. I cannot tell how it was made. I think the probability is that Mr. Abrams would not have stated it without it was correct.

89. I want to have some data upon which we can proceed; I want to know the number of Courts that you are going to provide upon the ground floor; how much space they will occupy. I want to know what provision you are going to make for the Judges, and how much that will occupy; how much space the passages will occupy, and how much for light and air?—I am not aware that those sort of things are in any way determined or settled at the present moment; I understand that that will be settled hereafter. All I had to do was to ascertain whether certain quantities which were given to me could be located upon that ground.

90. Then you mean you are not prepared to show to the Committee that all these Courts which you have mentioned, with the requisite accommodation for the Judges, and what is necessary for passages and light and air, can be included in this space?—All that I have mentioned were in the particulars that were furnished to me, and I know that they can be accommodated upon the ground.

91. Then I wish to know how much you have allowed for each of them, in order to test that?—The plans and the particulars will show, but I have not got them here; it is quite impossible that I can state them from memory.

92. *Chairman.*] Are you aware that in the Courts of Justice Building Bill which has passed the House of Commons, provision is made to enable the Queen to appoint a Commission to consider the number of courts and offices and other details of the building which will hereafter be erected on the site which is to be purchased by this Bill?—Yes.

93. Consequently, has it been part of your business to go into the question of what building is to be erected upon this site?—My business was only to ascertain whether the site was large enough to afford the accommodation that was stated in certain papers which were furnished to me.

94. Were those papers general calculations of the number of Courts and offices which are required to be concentrated upon this site?—Yes; those papers stated in detail all the Courts, and all the offices attached to the Courts, which it was considered should be brought upon the site.

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95. Have you reason to believe that the list of Courts and offices which was supplied to you, was in any important respect different from the list of Courts and offices upon which Mr. Abrahams founded his calculation?—I believe they were the same.

96. Mr. *Selwyn.*] You have not got that list with you?—I have not.

97. Did it include the Land Registry Office, amongst other things?—No, it did not.

98. Is not that one of the offices which is put down in the Schedule as being about to be given up?—This paper is a general statement of what it did include. First, there was the Lord Chancellor's Court, one Court and eight rooms, containing a total of 3,336 feet superficial; not including staircases, passages, or closets, merely the rooms themselves.

99. And on the ground floor?—Those were all on the ground floor; next, was the Master of the Rolls; one Court, and 20 rooms for retiring rooms, chambers, and secretary's office; being a total of 7,596 feet.

100. Did that include the chambers for the Master of the Roll's clerks?—Yes, it does; a few of those rooms were on the upper floors. The next was Vice-Chancellor Kindersley's Court; one court, 23 rooms; together 8,142 feet. Then Vice-Chancellor Stuart's Court; one Court, 22 rooms; 7,101 feet.

101. I presume those are all to be on the ground floor unless you say to the contrary?—No, not all on the ground floor; the greater portion on the ground floor, but some of them above. Then Vice-Chancellor Wood's Court, one Court, 24 rooms, 8,475 feet; the Lords Justices' Court, one Court, five rooms, 2,232 feet; the Record, Writ, and Report Office, 11 rooms, 7,004 feet; the Inrolment Office, five rooms, 2,016 feet; the Accountant General's Office, 12 rooms, 6,892 feet; the Taxing Master's Office, 31 rooms, 9,938 feet; the Examiners, two Courts, seven rooms, 4,320 feet; the Petty Bag, three rooms, 1,152 feet; the Masters, Visitors, and Registrar in Lunacy, 17 rooms, 7,366 feet; the Solicitors of the Suitors Fee Fund, 4 rooms, 1,920 feet; the Chancery Registrars, 44 rooms, 13,968 feet.

102. Can you tell, without going minutely through them, how many of those you design to have upon the ground floor, how many upon the first floor, and how many upon the upper floors; what is the total of the Chancery Courts and Offices?—I think the Examiners are up-stairs; the Masters, Visitors, and Registrar in Lunacy are up-stairs; the Chancery Registrars are up-stairs, at any rate most of them.

103. When you say up-stairs, do you mean above the Courts?—On the floor above the Courts.

104. *Chairman.*] You do not mean over the Courts themselves, but higher than the level of the Courts?—I mean on a level above the Courts, nothing would be over the Courts. Then after that come the Common Law Courts, the Court of Queen's Bench, the Court of Exchequer, the Court of Common Pleas, the Admiralty Court, which is a very large apartment, the Office for the Registration of the Acknowledgment of Deeds by Married Women; and great provision is made for the barristers' robing rooms, consultation rooms, and those sort of rooms.

105. Mr. *Selwyn.*] How much is there allowed for that?—Including the Judges' retiring rooms, and so on, 11,077 feet space for copying clerks, housekeepers, and record depositories—there are very large depositories for records, all on the lower storey—the total that I have got, including the Record Office, is 224,561 feet.

106. Have you got the Land Registry Office?—No, that is not down.

107. *Chairman.*] I suppose there will naturally be some other offices which are not included in that list, for which you will have to make allowance?—Yes.

108. There is a return which is ordered to be printed by the House of Commons "of certain particulars respecting present Courts and offices proposed to be transferred to the Commissioners of Public Works and Buildings, or to become available for other public purposes, in accordance with the provisions of 'Courts of Justice Building Bill, 1865' and 'Courts of Justice Concentration (Site) Bill, 1865,' or either of them, and of buildings in the occupation of legal departments to be hereafter accommodated in the new Courts, in accordance with the provisions of the said Bills, or either of them; the return to give in separate columns the situation of each block of buildings containing such Courts, offices, and buildings, and the purpose to which each Court, office, and building is now assigned." Amongst them I find Nos. 33 and 34, Lincoln's-inn-Fields, which are now devoted to the Insolvent Debtors' Courts and Land Registration Offices?—They are not included in this list; I only look to what they at present occupy.

109. Would there be room upon the site to include the Land Registration Offices in the building you have already mentioned?—I should think there would.

110. Mr. *Selwyn.*] I understood you to say that there was sufficient, but not too much?—Not too much, because up to the present moment what is to go upon the land is to a certain extent undefined.

111. I understood you to say that the site was sufficient, but not too much?—Exactly; I do not think it is more than ought to be purchased for the purpose.

112. Then you will have to make provision for those offices which are now situate at 33 and 34, Lincoln's-inn Fields?—The Land Registration Offices do not occupy both those houses, but only a portion of one house.

113. How is the other occupied?—I think it is occupied by some of the Insolvent Debtors Courts and offices, and papers.

114. Do you propose to concentrate them?—No.

115. Where do you propose to leave them?—The Bankruptcy Court is not included; it was struck out from this list.

116. That is not to be concentrated at all?—It is not included in this list.

117. Mr. *Murray.*] Have you a Court in which all the twelve judges can assemble, similar to the present Exchequer Chamber?—There is no such Court provided; I have always understood that all those questions were afterwards to be considered by the Commission. All that has been done now is merely preliminary, to ascertain whether or not it is possible that the site would answer the purpose.

118. I wish to know whether there is space sufficient for each Court?—That would require a remodelling of the plan.

119. Mr. *Selwyn.*] Does your plan, as far as you have made it, occupy the whole space?—Yes.

120. What would be the surplus, if any; would you have anything to waste?—I think it is very likely

likely that a portion of one of the wings is more than is required for the offices mentioned in this paper.

121. Do you think that that portion of the wing would be sufficient for the Land Registry Offices?—It would be sufficient for that I am quite sure.

122. Have you provided for a Library for the Bar?—Yes.

123. What is the area of that?—It is included in the total that is given here of 11,077 feet.

124. That is on the ground floor?—Not exactly on the ground floor; it is above the level of the Courts, but they would have to go up-stairs to it.

125. Would this site allow for any increase in the number of Courts as that which took place in 1840?—I should think not.

126. You could not provide for that at all?—It would be very difficult to get another Court upon the ground, or more than one or two at the outside, because they require to be on the ground floor.

127. And the whole of the ground floor is fully occupied?—You could only get Courts upon the ground floor by taking some of the offices up above.

128. Mr. *Murray.*] Suppose another judge was appointed equivalent to a Vice Chancellor, such as a Chief Judge in Bankruptcy, is there room for him on the ground floor?—By removing some of the offices up above.

129. But not otherwise?—Not otherwise.

130. Mr. *Selwyn.*] Is there any provision for a communication between the Temple and this building except that which we have heard of?—No, none whatever; it would be practicable of course, but none has been made.

131. Do you propose to widen Fleet-street or the Strand?—Yes, very considerably.

132. What would be its width when widened?—It is proposed to widen the footpath very considerably, but not the street itself.

133. I understand that you propose to leave Temple Bar?—That I suppose would depend upon the Corporation of London; we do not interfere with it. This plan will show what I have been describing; it shows how much of the Strand will be widened at Temple Bar (*handing in the same*).

134. Anyone coming from the Temple would have to cross that wide street?—They must cross the street, or else they must go underneath it or above it.

135. And in the same way anyone coming from Lincoln's-inn would have to cross this widened Carey-street?—They would have to cross Carey-street.

136. And also anyone coming from this Court which you propose to put on the west would have to cross your new street running northward?—Yes.

137. You do not at present propose any subterranean or ærial communication?—Nothing of the sort has been proposed up to the present time.

138. Can you tell, speaking in round numbers, what is the area of house property that is purchased for the purpose of throwing into the roads or streets?—About 2 ¼ acres.

139. Were you concerned in making the estimate for the purchase of the property?—Yes.

140. When was it made?—In December and January last.

141. I suppose these wide spaces (*referring to the Map*) are intended to be left for air and light?—Yes.

142. What is this space in the middle?—That would be a central hall which would give access to all the Courts, like Westminster Hall.

143. But these wide spaces would not be covered at all?—Not at all.

144. You have shown this plan to the Committee as that which appears to you, upon the whole, to be the best appropriation of the site to be purchased?—Yes.

145. Do you consider that other alternative plans might be adopted or suggested showing a different arrangement?—Yes, undoubtedly.

146. Supposing it were thought desirable to have the whole building under one roof would there be any difficulty in making this new street which you propose on the western side of the square block, and substituting a new street where Clement's-lane now runs on the western side of the west block?—It would be practicable to do so; but the new street would be a crooked street, and it would not lead anywhere except into Clare Market. I have considered it to be indispensable for so large a building as this to make good accesses from Carey-street and the Strand; and I have also thought that it would be an advantage to the Probate Court to be under a different roof.

147. But supposing the objection to any separation of the building were paramount, could you not meet it by carrying your new street round the boundary of the west and the north-west sides of the site to be purchased?—It would be a very inferior communication.

148. But still if it were thought important to have everything under one roof you might attain that object by sacrificing what you think the most convenient approach from Carey-street?—If it were thought absolutely necessary to include everything under one roof then I should have proposed to have purchased more property in Clement's-lane and Pickett-street, and to have taken the new street altogether further to the west.

149. Are the Committee to understand that the disposition of the ground will not be decided upon until after the Commission which is to be appointed has fully considered the subject?—I understood that they were appointed for the purpose of deciding upon the disposition of the ground.

150. Therefore, the Committee are to take this plan, at present, as your own idea of the best arrangement, rather than as the design which will be adopted by the Government?—Exactly so.

151. Mr. *Murray.*] You seem to have got the minimum quantity of land, and there are several Courts which you have not taken into account?—I do not think it is possible that less land can be taken.

152. You might want more?—You are much more likely to want more than not to occupy that.

153. There is no room for an increase in the number of the judges, or in the number of the Courts?—I cannot say.

154. *Chairman.*] Supposing it to become necessary hereafter to enlarge the site for the purpose of erecting new Courts and new offices, in which direction do you think it would be most convenient to get fresh ground?—Westward.

155. Will you describe how that is?—The best way to enlarge this site would be at once to continue Carey-street westward right through

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Clare Market, and then, if the site is much enlarged, Clement's Inn should be taken.

156. Supposing it were desirable to enlarge it northward do you think it would be a good arrangement to buy property on the north of Carey-street, and make some communication through Carey-street with the property so purchased?—That would be making independent buildings, for any building on the north side of Carey-street must be quite independent of the greater building.

157. But, of course, there is a considerable quantity of land which might be purchased at an ordinary and moderate amount?—No; I think that land north of Carey-street would be extremely valuable, because certainly one-half of that distance belongs to Lincoln's Inn.

158. I am speaking of the part which does not belong to Lincoln's Inn, but which is to the west of Lincoln's Inn, between that and Portugal-street?—There is a certain portion there which might be obtained.

159. Mr. *Selwyn.*] But if you went north of Carey-street you get into Lincoln's Inn?—Yes.

160. In fact, you would be putting the Courts where they are now?—You would be driving away the lawyers.

161. *Chairman.*] But supposing you were to go northwards to the western half, you might go to the north point without reaching Lincoln's Inn?—The probability is, that if the site requires to be enlarged, it would be better done to the westward.

162. Mr. *Selwyn.*] You suggest a continuation to Carey-street?—Yes.

163. Do you think that would be very advisable?—I think it is absolutely necessary.

164. That is, I presume, on account of the very bad communication that there is now?—The communication from the west and the north-west ought to be improved.

165. It is very bad indeed now, is it not?—There is no good communication from the north; the best plan is from Portugal-street and Serle-street.

166. That is very narrow, is it not?—It is not what it ought to be.

167. You have to go through Clare Market, which is only a footway?—Yes; there is no proper thoroughfare there.

168. Therefore you consider some enlargement of that kind absolutely essential?—Yes.

169. *Chairman.*] Was not this continuation of Carey-street proposed some years ago by the Commission upon Metropolitan Improvements?—It was recommended by them, but now it has been in a great measure put a stop to. At that time it was perfectly feasible, and was recommended to be carried out as a great central thoroughfare.

170. You intended to proceed from the west up to the Post-office?—Up to Cheapside.

171. Supposing that so great a metropolitan improvement as that is not completed, would it not be very easy to get a better access to Holborn by breaking through that narrow belt of houses which occupy Gate-street at the north of Lincoln's Inn Fields?—That would make a very good opening, and then it would be advisable that it should also be open to the south of Lincoln's Inn Fields.

172. Might you not also break through Turnstile without much cost?—There are several ways of doing it. Turnstile has often been recommended as a place for an opening to be made. It has been suggested that there should be a thoroughfare along the east side of Lincoln's Inn Fields, but that has always been very strongly objected to by the Benchers. I am not at all sure that it would not be much better and more to their satisfaction and advantage that this new street from St. Clement's Church should be continued in a straight line up to Red Lion-street. It would pass through Lincoln's Inn Fields, but would not do them the same damage. This street might with advantage be continued through Lincoln's Inn Fields into Holborn directly opposite Red Lion-street.

173. As a metropolitan improvement you think that would be a very great one?—A northern communication from the Strand to Holborn, in that direction, has been looked forward to time out of mind; in fact, when Pickett-street was formed, in the beginning of this century, the line of what is now called Pickett-place was the commencement of the street.

174. Then these improved accesses to the Strand from the north have been contemplated independently of the erection of the Courts of Justice in this place?—They were contemplated, in the first instance, for the Courts of Justice to make an isolated building, with good thoroughfares around it, but they would also, if continued, be a permanent improvement.

175. The question I asked you was, whether these improved accesses which you speak of were not contemplated before there was any question of placing the Courts of Justice upon the site where we are now going to put it?—Yes, frequently.

176. Mr. *Selwyn.*] What would be the western end of this proposed new street which is to be a continuation of Carey-street?—That would depend entirely upon the plan which is adopted. There would be two ways of doing it: one would be to branch out off into Newcastle-street and so into the Strand, with another branch northwards towards the end of Queen-street or the upper part of Drury-lane.

177. Where would this street, as shown upon this plan, if continued, lead to?—I think in all probability it would continue nearly as far as Houghton-street, and then by this improved branch south to Newcastle-street, and north towards Drury-lane.

178. The *Chairman.*] This would not have a direct western course, but be merely branches, north and south?—Yes.

179. Mr. *Selwyn.*] It would go through a thickly populated district?—It would go through a very bad district.

The *Chairman.*] In fact, through Clare Market.

180. The *Chairman.*] If you have been employed on behalf of the Office of Works in purchasing houses for public offices and new streets, can you state whether you have been in the habit of allowing time for the weekly tenants to find lodgings elsewhere before the day when they are actually put out of their houses?—The practice has always been to give them every possible facility. We do not always compensate them in money; sometimes we do, but generally we allow them time to remain; sometimes we allow them to remain rent free a month, and sometimes two months, and sometimes three months, or even longer than that, according to circumstances.

181. When you have been in the habit of allowing them to remain rent free sometimes, after you have got possession of the houses have you compensated them in money for the expense of

of moving their furniture, and for the trouble and loss of time in seeking other lodgings?—Generally we have done so, it always depending upon the circumstances of the case.

182. Do you think from your experience that cases have arisen where large numbers of the labouring classes have been put out of their houses and have not succeeded in finding other lodgings elsewhere?—In every case that I have had anything to do with we took some trouble to ascertain where the people went to, and we always found that they spread themselves around and got into rather better localities than those we drove them from. First of all, there are very few of what I call the labouring classes there; there are a great many people dwelling upon the spot, but I should think very few who can really be called the labouring classes. What I understand by that is a honest workman, who receives his weekly wages and lives in a respectable manner.

J. Pennethorne, Esq.

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183. Mr. *Selwyn.*] How many people are there altogether upon the spot?—It is very uncertain; it may be 3,000 or 4,000; I cannot tell.

[The Witness withdrew.

The following letter from Mr. *John Bingham*, on behalf of the Rev. *R. H. Killick*, was read:

CONCENTRATION OF COURTS OF JUSTICE SITE BILL.

"17, Parliament-street, Westminster,
"14 March 1865.

"Dear Sir,

"The Rev. R. H. Killick, Rector of St. Clement Danes, consulted me some time since with reference to the compensation to be paid him by reason of his Easter dues, &c., arising from the houses to be removed for the purposes of this Bill, and, under my advice, he presented to the House of Commons his last petition. I have perused the clause which you have tendered to the Rector of St. Clement Danes, the Perpetual Curate of St. Thomas, within the Liberty of the Rolls, and the Rector of the parish of St. Dunstan in the West; and I am of opinion that such clause will be quite satisfactory to Mr. Killick, and the other gentlemen, provided that, at the end thereof, the words are added, 'Provided always, that nothing in this Act contained shall interfere with or prejudice the rights of the Rector of St. Clement Danes, reserved to him and his successors by an Act of Parliament made and passed in the 35th year of the reign of His late Majesty King George the Third, intituled 'An Act for widening and improving the entrance into the City of London, near Temple Bar, for making a more commodious street or passage at Snow-hill, and for raising on the credit of the Orphans' Fund a sum of money for these purposes.'"

"I am, &c.
(signed) "*John Bingham.*"

"James Gardiner, Esq.,
"Solicitor to the Board of Works, &c."

Mr. HENRY CADOGAN was then called; and Examined, as follows:

184. *Chairman.*] WHAT is your occupation in life?—I am an Architect and Surveyor.

185. Are you personally acquainted with the houses which are to be taken by the powers of this Bill?—I have known the neighbourhood thoroughly for nearly 30 years, and have been in a public office 16 or 17 years.

186. Do you act for the parish?—I do; I am valuer and overseer for the whole of this property.

187. That occupation has led you to form an intimate personal knowledge of the houses in question?—Yes.

188. Have you ascertained the number of inhabitants of the labouring class who live in those houses which are to be pulled down?—I have, and I can give them separately.

Mr. *H. Cadogan.*

189. Mr. *Selwyn.*] What is the total number of inhabitants?—There are 343 houses and 4,175 persons occupying them.

190. What is the number of the labouring class?—3,082, including adults and children.

191. That is contained in returns which you can put in evidence?—Yes.

[*The Witness handed in the same, which are as follows:*]

LAW COURTS SITE.

(A.)—TABULAR STATEMENT of the Labouring Classes and Poor to be Removed.

ADDRESS.	Property.		Artisans.	Printers.	Law Writers.	Clerks.	Shopmen.	Labourers.	Hawkers.	Laundresses.	Various Callings.	Doubtful.	Bad.	Number of Adults.	Number of Children.	Total.
	Houses.	Rooms.														
Horse Shoe-court	2	8	5	–	–	–	–	–	–	–	–	–	–	12	8	20
Sawyer's-yard	1	2	–	–	–	–	–	1	–	–	–	–	–	2	–	2
Clement's-lane	23	156	38	9	3	1	–	27	–	–	80	–	–	302	136	438
Clement's-court	3	14	1	1	–	–	–	1	1	–	–	–	–	21	8	29
Plough-court	10	74	2	–	–	–	–	28	–	–	–	–	–	109	63	172
Yeate's court	6	54	16	1	–	–	–	10	1	2	1	–	–	80	56	136
TOTALS	45	308	62	11	3	1	–	67	2	2	81	–	–	526	271	797

Mr. *H. Cadogan.*

14 March 1865.

Law Courts Site.

B.—Tabular Statement of the Labouring Classes and Poor to be Removed.

ADDRESS.	Property.		Artisans.	Printers.	Law Writers.	Clerks.	Shopmen.	Labourers.	Hawkers.	Laundresses.	Various Callings.	Doubtful.	Bad.	Number of Adults.	Number of Children.	Total.
	Houses.	Rooms.														
Lower Serle's-place	21	155	36	5	–	–	–	56	1	5	7	–	–	253	193	446
Middle Serle's-place	18	155	18	10	1	2	–	81	2	–	1	–	–	245	173	418
Serle's-place	2	18	7	2	–	–	–	–	–	–	–	–	–	20	7	27
Ship-yard	23	130	19	11	1	1	–	37	1	–	5	–	–	225	151	376
Chair-court	6	26	2	–	–	–	–	7	1	2	–	–	–	45	27	72
Crown-court	8	42	11	8	–	–	–	7	–	–	–	–	–	57	24	81
Crown place	3	24	1	11	–	1	–	8	–	1	–	–	–	44	20	64
Cromwell-place	7	21	6	–	–	–	–	4	–	1	–	–	–	30	36	66
Old Boswell-court	11	81	11	3	8	2	–	43	–	–	–	–	–	112	57	169
Newcastle-court	14	117	7	3	–	–	–	22	23	–	151	–	–	295	80	375
Hemlock-court	1	12	–	–	–	–	–	–	–	–	30	–	–	30	–	30
Robin Hood-court	2	21	–	–	–	–	–	14	–	–	–	–	–	29	23	52
Star-court	7	33	9	1	–	–	–	5	1	2	5	–	–	45	21	66
Bailey's-court	2	11	1	1	–	–	–	4	–	–	–	–	–	18	10	28
Brick-court	2	9	–	1	–	–	–	5	–	–	–	–	–	12	3	15
Totals B	127	855	128	56	10	6	–	293	29	11	199	–	–	1,460	825	2,285
Totals A	45	308	62	11	3	1	–	67	2	2	81	–	–	526	271	797
	172	1,163	190	67	13	7	–	360	31	13	280	–	–	1,986	1,096	3,082

Law Courts Site.

(C.)—Number of Houses and Resident Occupiers not of the Labouring Class.

ADDRESS.	Property.		
	Houses.	Residents.	
Strand and Pickett-street	23	130	
Middle Serle's-place	2	–	Empty.
Serle's-place	18	180	
Little Horseshoe-court	2	6	
Lower Serle's-place	5	20	
Ship-yard	5	42	
Ship and Anchor-court	2	–	Warehouse.
Crown-court	2	–	Empty.
Crown-place	3	–	Part of Printing Office.
Pickett-place	3	14	
Old Boswell-court	3	–	Part of Printing Office.
New Boswell-court	17	68	
Clement's lane	5	21	
New-court	3	22	

ADDRESS.	Property.		
	Houses.	Residents.	
Carey-street	23	177	
Horseshoe-court	1	–	Empty.
Clement's-inn	4	23	
Clement's-inn Foregate	5	37	
Hemlock-court	17	205	
Bell-yard	23	127	
Bailey's-court	2	–	One Empty; one Warehouse.
Fleet-street	3	21	
Totals	171	1,093	
Totals (A. and B.)	172	3,082	
Grand Totals	343	4,175	

192. Will you state how you obtained the information which you have put into that tabular statement?—By going from house to house, and ascertaining the number of persons in each room.

193. By personal inquiry?—By personal inquiry.

194. Have you reason to believe that you have got accurate and true answers to the questions which you put?—As near as we could possibly get them; I think they are true.

195. Your personal acquaintance with the district would have enabled you to detect any false information which had been given you?—Yes; being generally known throughout the district, they would give me information, perhaps, when they would not to other parties.

196. Probably, if somebody came they did not know, they might have declined to give any information?—Very likely they would.

197. Can you give the number of families?—I can give the number of houses, rooms, and the number of parties who occupy these rooms. For the part that are classed as labouring classes, there are 172 houses, and 1,163 rooms in these houses. There are 190 artisans, 67 printers, 13 law writers, and 7 clerks.

198. State what you include under the term "clerk"?—A party who is employed in some solicitor's, or other office in the neighbourhood, and who merely sleeps there. There are 360 labourers.

199. Will you state what species of labour the bulk of them follow?—I am obliged to take their word for what they are; they tell me they are labourers; but I have been told by people who knew them that many of those who call themselves labourers are parties who black their faces and go about singing. There are 31 hawkers.

200. Does that include costermongers?—Those people who generally go about with baskets to hawk and sell anything.

201. Is it a correct distinction to draw between a costermonger and a hawker, to say that the former has a donkey, and the latter has not?—I cannot define it. There are 13 laundresses, and 280 of various callings. It is not necessary to state that in Hemlock-court, in one house included in this number, there are 30 persons who sleep there nightly; that is, they go there from night

night to night; and any person who can produce 4 *d.* has a bed to himself.

202. Do they sleep in beds in one dormitory?—No, in 12 rooms.

203. Do you suppose that each of them has a bed to himself?—Yes, a small iron bedstead.

204. Are they very closely packed?—They average from three to four in a room.

205. And the rooms are not large rooms?—Some are large, with three or five beds in them; but some are smaller, and contain only three, and some only two.

206. Can you state anything as to the sexes of the parties?—They are all single men. There are two houses in Clement's-lane, which vary in nightly lodgers from 115 to 80; 80 is the average; sometimes they are less. There have been as many as 115 in two houses. They go there every night, and those who can produce their 4 *d.* have their bed.

207. Are they also men only?—Men only. There is another house in Old Boswell-court in which 24 sleep in the same way; they call themselves travellers. In Newcastle-court there are two houses, where there are 62 who sleep in the same way. Beyond these we have others, where the houses are generally occupied by different parties, such as tradesmen along the Strand, Pickett-street, Serle's-place, and so on, in which there are 171 houses, containing 1,093 residents.

208. Do you think that is much above the average of the densely populated parts of the metropolis?—We have the same number of houses within one. There are 171 houses occupied by tradesmen and other parties, who rent the whole house; and there are 172 which are occupied by the working class. The 171 houses have 1,093 persons in them; and the 172 have 3,082.

209. What portion of the people whom you have enumerated require to live in that neighbourhood for the purpose of earning their living?—I do not think one-fourth of them.

210. Do you think three-fourths of them would be equally well able to earn their living if they lived in some other part of the town?—Perfectly well. Among these labouring classes I do not think there really is an artizan or workman in regular work. I hardly saw one; they are very glad to get a job if they can.

211. Do you think they would have more facility for getting a job by living in that particular part of London, than if they lived elsewhere?—I do not think they have.

212. You stated that there were 67 printers; is it necessary for those printers to live in that part of the town, because they wish to be near the printing establishments?—I think it is. There are the Messrs. Watts, who are large printers; Messrs. Kelly, large printers; Mr. Shaw, a large printer and bookbinder; and Mr. Stevens, in Bell-yard.

213. Those whom you have enumerated are living in premises which will be pulled down?—Yes.

214. When they move elsewhere, will the journeymen printers require to remove also, to be near their places of business?—I should think they would, because their printing offices will be removed, therefore the printers would naturally move to be as near the printing establishment as they can.

215. Is it desirable in the trade of printing that the journeymen printers should reside close to the printing establishments?—I do not know that that is so.

216. You stated that there were 13 law writers; is it necessary that they should live in the vicinity of Carey-street?—They live near Carey-street and Serle-street, in which are the offices of the law stationers who employ them from time to time as they want hands; therefore they live in the neighbourhood to be close to their work.

217. Do you think, from what you know of the neighbourhood, that they will be able to find lodgings in some other place within easy reach of Chancery-lane?—I think they would.

218. Do you know whether there are vacant houses or rooms in that neighbourhood?—I do not.

219. You stated that there were 280 of various occupations; can you give the Committee an idea of the character of the employment of those 280 people?—I do not know what their occupations may be, but I know there is an immense number of those parties who go about singing with black faces—"niggers," as they call themselves.

220. Are there any single women among the number?—No, I do not know that there are. There are some very low characters among them; but a great many of that class have been removed recently.

221. How are the houses now occupied from which they have been removed?—Newcastle-court consisted wholly of brothels until they were indicted; and now they are inhabited by costermongers and these black-faced fellows, and a very low class of persons.

222. Mr. *Selwyn.*] Some of these printers whom you have spoken of are law printers, are they not?—They work mostly at printing offices.

223. Do they not print law books and law documents, such as Bills and Answers and Evidence?—I dare say they do; I do not know.

224. Is not that the reason why they live in this neighbourhood?—No doubt it is.

225. Where do you think all these poor people are to go?—I cannot tell you, but they would not be persuaded into the model lodging houses upon any terms.

226. Is not this site surrounded by a very densely-populated quarter of London?—I think you will clear away a densely-populated part if you take this block.

227. Then where are the people to go to?—I cannot tell.

228. How many people are there with separate holdings?—Of parties who are not classed among the labouring poor, there are 171 houses, and 1,093 occupants altogether.

229. *Chairman.*] That includes people who have no leases, but are weekly tenants?—People who occupy the whole house whatever their holding may be; whether it is weekly or yearly I do not know.

230. Mr. *Selwyn.*] I mean a person who holds a set of chambers. Suppose, for instance, a tradesman has got a house, the lower part of which he keeps entirely for the purposes of his business, and he lets, say, four sets of chambers?—Yes, in Clement's-inn there are five houses, and in those five houses there are 37 parties.

231. They make up the 1,093 which you have spoken of?—Yes; and if you add the labouring classes of 3,082, that makes 4,175, the gross amount which I gave.

232. *Chairman.*] When you stated that the poorer

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poorer classes who will be dispossessed, will not go into model lodging-houses, what do you found that opinion upon?—Upon the filthy state in which they live; they will not clean their rooms or open their windows to get air. Newcastle-court may be taken as a sample of that; it is the filthiest place in the neighbourhood.

233. Does it follow that because at present they live in filth, that they will have any objection to live in cleanliness?—I have seen those houses emptied many times, and the same parties occupy them again.

234. Do you know of any instance of their having declined to go into cleaner rooms in the model lodging-houses?—I do not know any particular instance except that they live together in herds, and there they will remain; they will go into no place, I believe, where there is any restriction as to cleanliness.

235. Do you think that it is a benefit to that class that such filthy houses and such very unwholesome places should be destroyed?—I do; I think it would be a very great sanitary improvement.

236. Always assuming that they could find healthier and cleaner dwellings elsewhere?—Exactly.

237. Have you reason to suppose that the inhabitants of this district are at the present moment above the numbers which constitute the average of the year?—Yes; I am sure of it. I have a list of the charities of the parish in my pocket.

238. Will you explain why there are at the present moment more inhabitants than usual?—Because there is an immense deal given away in charity in the shape of coals, tea, bread, sugar, and anything that they may require. So soon as those charities are expended, we lose at least one-half.

239. Then are we to understand that you consider there are one-half more inhabitants in this district now than there are when the charities have ceased to be distributed?—They are gradually getting less now than they were at Christmas.

240. Mr. *Selwyn.*] Your calculation is carried down to the present time?—To the present time, just as I find them now.

241. These are Christmas charities, I presume?—Yes; they are not all given away yet.

242. They are given annually at Christmas or about Christmas?—Yes.

243. *Chairman.*] What proportion do you consider has been added to your list of people by the disposal of these charities?—I can hardly tell that, but there are a greater number there than will be two months hence, I am certain.

Mr. JOHN CHILD, was called in; and Examined, as follows:

Mr. *J. Child.*

244. *Chairman.*] ARE you the overseer of the parish of St. Clement's Danes?—I am.

245. Can you inform the Committee as to what is the character and condition of the houses which are to be purchased under this Bill?—The major part of the locality is of the very lowest description.

246. Do you consider that the courts are very unhealthy?—Very; there is no doubt of that.

247. And injurious to the character and morals of the people who live there?—Decidedly so.

248. The Committee have been informed that great numbers are collected by the circumstance that certain sums of money are distributed in charity; can you state to what extent; do you think the increase is above the average?—I should think, taking the four months, from December to the middle of March, that there is a third more in the different localities.

249. Your examination having been conducted recently, do you think that the increase of a third has been in existence quite recently?—I am positive of it, arising from the charities which I have had to distribute within this last fortnight.

250. Is the distribution finished at present?—No, it is now going on; it is very nearly finished. The tea and bread tickets are now being distributed; those are the tickets which we have to exercise the most caution with; and so with regard to the coals which we distribute; we give them in sacks of two hundredweight each; then we give two ounces of tea, one pound of sugar, and 4 lb. loaves. With those articles we have to exercise a great deal of caution, in consequence of these casual people going into the parish for the sake of getting the tickets; we keep a register. Many come from different parts of the metropolis, mostly from St. Giles's, and take a room for a week solely for the purpose of getting the coals if possible. We have had to pass a resolution that no tickets be given to any persons unless they can prove they have been living in the parish 12 months.

251. Do you think from your knowledge of the people you are speaking of, that they would be exposed to great hardship by having to seek lodgings elsewhere?—Not at all; for I believe at least one-third will vanish from the parish entirely in the course of a few weeks from the present time, and we shall not see them again until next December.

252. They are able to find lodgings elsewhere?—Yes, they do so.

253. Do you consider them, then, of that wandering and vagrant population who are constantly shifting from place to place?—At least, a third of them I consider to be of that description.

254. With regard to the other two-thirds, do you think that their tie to the parish is such that ejecting them will inflict no loss upon them?—No; not two-thirds of them are of the respectable working class.

255. Do the respectable and honest labourers find work close at hand?—In some few of the courts, and there are some few who work in the immediate neighbourhood, but very few.

256. Are there any who work in their own homes?—There are some who work in their own homes, and some are employed by the law stationers. They live in the more respectable courts, but in such courts as Newcastle-court and Shire-lane, or Lower Serle-place, there are none of the respectable class at all.

257. It has been stated that there are 13 law writers in this district; do you consider that they would

would have any difficulty in obtaining other residences in the legal district?—No, I think not; there is Houghton-street and Holles-street, and several other streets in the neighbourhood, in which they might find rooms; in fact, I know complaints from landlords in Houghton-street and Holles-street, that they cannot let their rooms so freely as they could wish.

258. Is it the fact that they cannot find any tenants, or that they cannot find any tenants at the price they ask?—They cannot find tenants; I called the attention of the overseers to some of the houses on the Duke of Norfolk's estate, which were not let, and in which two or three families were allowed to reside rent free. They made a representation, that allowing these families to reside in these houses, prevented the letting of their houses in Houghton-street and Holles-street. We served a notice on the agent of the Duke of Norfolk to have those families removed.

259. Is the Duke of Norfolk's estate on the south side of the street?—It is.

260. That is a district, is it not, where several of these people, who are to be turned out, might find accommodation?—That is not so, because the Duke of Norfolk will not let his houses until the completion of the Thames Embankment. There are several houses empty, and small families who have been recommended, have been allowed to reside in those houses rent free. They have been removed by the overseers through the parties in Houghton-street and Holles-street, complaining that they had empty houses which these people must take, if they were not allowed to live rent free in the Duke of Norfolk's houses.

261. Mr. *Selwyn.*] The parochial authorities have been very active in indicting the brothels, have they not?—Yes.

262. And very successful?—And very successful.

263. You have succeeded in dispossessing a very great number?—Yes. It is only about three weeks ago that we prosecuted one man in Lower Serle-place, or rather Shire-lane, as it is called, and he pleaded guilty.

264. Then the houses which were before occupied by prostitutes, are now occupied by poor men?—I cannot say that exactly, for I should not like to say that they are absolutely prostitutes. The class of women who are to be seen about Temple Bar reside in some of these houses in Lower Serle-place.

265. What class reside in Newcastle-court?—They are men, those tramps, and niggers, and hawkers.

266. Then you state that they vanish at particular times; where do they vanish to?—They seem to leave the parish entirely; you do not see them go.

267. Then they come back again?—We see their faces again in December, just before Christmas.

268. With respect to the houses south of the Strand, I understood you to say, that in consequence of the Thames Embankment, the Duke of Norfolk will not allow the houses to be occupied at all?—No; some of the houses in Arundel-street, and one or two in Norfolk-street, have been empty for some time, and through the interference of the neighbours, the Duke of Norfolk's agent has allowed more than one family to reside in them rent free, and then upon the complaint of the owners of houses in Houghton-street and Holles-street, they have had to remove. We served a notice on the Duke of Norfolk's agent that we should assess those houses, if more than one family resided in them.

269. Do you say that, at present, the accommodation that would be afforded by these houses of the Duke of Norfolk is denied to them?—Yes; in consequence of what the Duke has ordered, because it is apprehended that the Thames Embankment will be a great improvement; and they are waiting till the embankment is completed, and then they will let the houses to a superior class of people.

270. Then, the property will be improved in consequence of the Thames Embankment?—Yes.

271. Then, there will be a further dispossessing of the poorer classes?—Not now, because there is only one family in each house. There will not be more than nine or ten houses empty. It is merely just to take care of the house.

272. Mr. *Murray.*] Have you the distribution of all the charities in the parish of St. Clement's Danes?—All the overseers' charities.

273. What is the amount annually?—The amount that the overseers annually distribute in coals, tea and sugar, is 170 *l.* or 180 *l.*

274. That is distributed amongst the better class of the poor?—Yes.

275. Amongst these houses?—Yes; there are other localities, such as Houghton-street and Holles-street, which are more deserving of these gifts.

276. Have you any other charities?—There is the District Visiting Society. They receive 100 *l.* a-year; and then there is a charity called the Holborn Estate Charity, which is distributed by the lady visitors.

277. Amongst these inhabitants?—Yes; when they see that they are deserving.

278. Have you any other charities?—There are some other smaller charities; the churchwardens have some other charities which they distribute. They are mostly to widows.

279. All in the same neighbourhood?—It takes in the whole parish.

280. Do the recipients of these charities live in this neighbourhood?—No; the churchwardens' charities are given to the really resident poor.

281. Upon the average, what do you give in charity to the inhabitants of this district now?—I should not like to say exactly. As far as I am concerned myself, I give as little as I possibly can.

282. I thought you stated that the houses were thickly populated in consequence of the charities?—They get more from the lady visitors than they do from the overseers, because they make them work for it.

283. The *Chairman.*] What is the population of the parish?—I think about 17,000.

GEORGE JOHNSON, Esq., M.D., was called in; and Examined, as follows:

G. Johnson, Esq., M.D.
14 March 1865.

284. The *Chairman.*] YOU are a physician?—I am one of the physicians of King's College Hospital.

285. Have you had personal acquaintance with the district between the Strand and Carey-street?—Yes; I know it very well, in consequence of having been physician to the Carey-street Dispensary for a period of six years. It is 12 years since I resigned that appointment, but for six years I was physician to that charity, and in the performance of the duties of that office of course I had to visit at their own homes those of the patients who were too ill to attend at the dispensary, so that I know the district very well.

286. Will you state what you consider to be the character of the district?—It certainly is a very densely-populated district; it is a very crowded district. I should think there are very few districts in London in which so many houses are crowded into the same space. It is made up of narrow courts and alleys; for instance, Middle and Lower Serle's-place and Ship-yard are very narrow places; there is no roadway between. The houses are lofty houses, with but ten or twelve feet between them, and of course they are very concentrated indeed.

287. Is that arrangement of houses detrimental to the health of those parties who reside there?—Highly; it must be so. There is very little air or light admitted to the houses in Middle and Lower Serle's-place and Ship-yard. The houses are built very high and close together. The upper part of the houses projects over the lower, so that there is very little space between.

288. Is there constant fever in some portion of these courts?—There is a great deal of fever there. Clement's-lane, I should say, is one of the very worst lanes in all London in a sanitary point of view. When I was physician to the dispensary, there were certain houses in that lane in which fever was rarely absent. I had constantly to visit several of those houses; they are very dirty and very crowded.

289. Do you attribute that fever to the unwholesome character of the houses themselves?—Certainly.

290. Did you find that the fever was given to successive inhabitants who occupied those houses?—Yes; it was just that form of typhoid fever which depends on local causes. There was a continual succession; as fresh tenants came in they sickened with the fever.

291. So that it is a merciful act to pull down houses which give fever to the successive occupants?—Most unquestionably.

292. Is the drainage bad?—I should think it is; it must be, I should think. I should think there are cesspools there. I have not particularly investigated the matter of drainage, but I should imagine it must be very bad.

293. Is it not the fact that in the whole of that district there is no street wide enough to admit of a carriage?—From Carey-street to the Strand I believe it is impossible to drive down.

294. Do you think there is any free current of air?—Of course the ventilation is excessively bad. So far as I remember, I believe there are very few families who have more than one room to live and sleep in.

295. Do you think, from your experience, that an evil sanitary condition acts directly upon the moral character of the residents?—I should think it must, more or less.

296. It is depressing to their whole nervous system, is it not?—I should think it is one cause of intemperance. It is undoubtedly one great inducement for the people to take drams, because as they feel depressed by the impure air they must resort to strong stimulants.

297. Have you observed that gin becomes a substitute for fresh air?—Yes, and a very bad one.

298. Instead of invigorating, it aggravates the state of depression, and so adds to the mischief?—Yes.

299. Do you think that this is as bad a part of London as any other that can be found?—I think that certain streets and courts are as bad as can be found anywhere. The visiting district of the dispensary included certain parts of St. Giles's, and some parts are as bad as any part of St. Giles's.

300. Do you think that the worst courts occupied by the lowest class of people were, when you knew them, as densely populated as it was possible to be?—Quite; you cannot well put two families into one room.

301. Do you think it is impossible that if these poor people have to seek for lodgings elsewhere, that they could be as badly lodged as they are now?—I should think they cannot very well be worse lodged.

302. Mr. *Murray.*] I understood you to say that you have had nothing to do with these houses for six years?—Not for the last 12 years.

303. Is it 12 years since you resigned your appointment?—Yes.

304. Are you in the habit of going into that neighbourhood now?—Yes, I am physician to the hospital this year.

305. Have you visited the neighbourhood recently, so as to be able to judge?—I went through the neighbourhood yesterday, so as to be able to refresh my memory.

306. Mr. *Selwyn.*] I presume your duty now is chiefly within the hospital?—Entirely so, as far as that district goes.

307. The hospital is so skilfully and so well managed as to require all your attention?—Yes, I have not time to visit dispensary patients; I am senior physician to the hospital.

308. *Chairman.*] When you examined these courts yesterday, did you see any perceptible diminution from what you saw when you were visiting physician?—They were just in the same state.

309. And you still think them places very unfit for human habitation?—Very unfit.

310. Do you think that they come under the description in the Nuisance Removal Act of houses that ought to be pulled down because they are places of fever and disease, instead of being places of health?—I think many of them would certainly.

Mr. WILLIAM HENRY HAMMOND, called in; and Examined, as follows:

311. *Chairman.*] WILL you state your profession and occupation?—I am a Surveyor and Estate Agent.

312. Do you reside in Bell-yard?—My offices are 28, Chancery-lane. My former place of business was at No. 30, Bell-yard.

313. Have your professional pursuits led you to gain a very intimate knowledge of the property which is scheduled under this Bill?—They have.

314. Will you state your impression of the character of that property?—I have an extract from our inspector's report, who went with Mr. Cadogan, and that is, that it comprises 172 houses, containing 1,163 rooms, inhabited by 1,986 adults, out of which there are 196 nightly lodgers included in that number, and children 1,163 making a total of 3,082. Deducting the nightly lodgers, it leaves the weekly tenantry at 2,886. That is with reference to the poor population. The other houses, with reference to not the poor population, comprise 171 houses, 1,093 residents, making a total of 4,175 upon the site.

315. Do you consider that more densely inhabited than is usual in the metropolis?—I consider it is.

316. What line has been drawn to distinguish the labouring class from the rest of the inhabitants?—By going to the different houses of the poorer class of houses, according to the plan which has been given to us.

317. Have you taken the persons who live on weekly wages as a definition of the labouring classes?—Yes.

318. What portion of those persons of the labouring class do you think are required to live in that neighbourhood for the purpose of earning their living?—I should think not one-half, as far as the printers are concerned. I have seen two of the principal printers on the site, Mr. Stevens and Messrs. Roworth. I have letters from them in which they state that scarcely any of their men reside upon the site. Messrs. Roworth's letter, sent yesterday, says, "We do not find that any persons in our employ reside in the immediate neighbourhood except the persons in charge of the premises." They state that many of their men go down by these workmen's trains, as they are called. I think these cheap trains will draw off a great many of these people. Mr. Stevens's foreman told me it was an advantage for their men to live away from the printing establishment. Several of them walk even four or five miles; and if they lived in the neighbourhood they would only go into the public houses and spend their money; and after being confined either in the compositors' room or the readers' room, it is an advantage for them to get away into pure air at some distance off.

319. Would there not be some difficulty in the way of the printers being at work at hours different from those at which labour is ordinarily carried on?—I made that inquiry of two of the principal printers, and they said not; that they could always manage that very well.

320. If printers live in the suburbs they might come up by railway and be on the premises at the time at which they were wanted?—Quite time enough.

321. Where do you suppose the 67 printers are employed who live in this district?—Most likely they are employed in the great printing establishments in the City or in the neighbourhood.

322. Do you think there is any reason why the artisan should live in that particular neighbourhood?—Not particularly.

323. Do you think the district is occupied by a good many of that class who are constantly shifting their residence all the year round?—Yes; quite so.

324. What opportunities do you think are afforded in the neighbourhood for those persons to find suitable lodgings after they are dispossessed from this district?—I think there are many in various parts. I walked near the "Times" printing-office last week, and observed within two minutes' walk of the office several bills up for rooms to let for single men. We have in our model establishments always a number of rooms. The establishment to which I refer is the Society for the Improvement of the Labouring Classes, of which the Earl of Shaftesbury is President. We have eight establishments, and there are always a number of empty rooms and beds. I have taken out that the average of the empties would be 10½ per cent.

325. In what part of the town is that situated?—Tyndal's-buildings, Gray's-Inn-lane.

326. Would that be within a moderate distance of the Carey-street site?—Quite so. We have other establishments in Drury-lane very near the site. I see in one of our renovated establishments for beds for single men, there are about 9 per cent. of empties.

327. Is that the average during the year?—Yes; that is, I take the year 1864. We have another establishment in Portpool-lane, and there the average is about 6 per cent. Many of the classes will not go into our model dwellings, such as those who herd together.

328. To what do you attribute this disinclination?—I think they would rather be together in a dirty, filthy state.

329. They do not value the cleanliness of your model lodging-houses?—Not at all, many of them.

330. Do you consider generally that the supply of habitations for the working classes in the central parts of London is insufficient to meet the demand?—I think so.

331. To what do you attribute that fact; is it that the demand is not supplied in this instance as in most others?—I think it arises partly from the railways having taken many of the houses down; but I find that they are rapidly now interfering to provide for all this want of habitations.

332. Do you consider that the value of land in the central parts of the town renders it unprofitable to erect buildings that must be let at the low rents at which the working classes are able to take them?—I think there are parts of the metropolis where sites might be purchased to erect houses or to improve others. I noticed such a part in St. Giles's-in-the-Fields, where there are many two-storey houses which might be improved and made higher, so as to hold double the occupants; and there are many back streets round Drury-lane and other localities to which the same observation applies.

333. Have you observed that there is a prejudice on the part of the working classes against living

Mr. *W. H. Hammond.*

14 March 1865.

living in houses of many storeys?—I have not noticed that. We have them in Endell-street four storeys high. There is no objection that I have ever heard of. The houses which are four storeys high are always full.

334. Do you consider that in the neighbourhood of Drury-lane there is property which might be purchased for the purpose of erecting lofty buildings for the poorer classes?—I think so; about Clare Market there are plenty which can be obtained.

335. Is there any vacant ground in the central part of London?—No.

336. Therefore, any effort which is made to supply dwellings for the labouring classes involves, as a preliminary step, a clearance of existing houses?—Quite so.

337. Must you go quite to the suburbs before you find unoccupied vacant ground fit for building?—I know of none, except that at the end of Farringdon-street. There is a large plot of vacant ground there, but they will not let it for purposes of this kind. I think you must go quite to the suburbs to get vacant ground.

338. Is the ground in Farringdon-street intended for building ground, and which has not yet been disposed of?—I would undertake to erect better houses for the houses in Charles-street, King-street, and the other streets leading off Drury-lane, which are very low houses. They might be very much improved, or in fact rebuilt to suit double the number of occupants.

339. Assuming that the society with which you are connected, or some other society, had an abundance of capital, do you see any great difficulty in their providing ample accommodation in a central part of the town for all the persons who are about to be dispossessed, and who desire to avail themselves of improved habitations?—I have no doubt that if capital were provided at a low rate of interest, there would be plenty of contractors, railway companies, and various others, who would be very glad to provide a large number.

340. Assuming, I suppose, that the rent of the rooms to be so built would not exceed the average rent of the rooms in the houses which are about to be destroyed?—Quite so.

341. Does your experience with respect to the improvement of the dwellings of the labouring classes show that there is any very great difficulty in obtaining sites by purchase?—I have not tried to obtain sites, but I think there might be sites obtained in the metropolis. I am inclined to think that there are very many now who would be availing themselves of cheap trains for going out to the suburbs. I was told only last week, by one of the surveyors of the large railway companies, that they were going to erect 500 houses for the benefit of the poor.

342. Do you think that, to working men, who earn regular wages, and support their families by those wages, it is a convenient arrangement to live in a suburban village and come to their work by railway trains?—Certainly; those who are in regular employ, such as artisans and printers.

343. But for persons of a poorer class, who depend upon casual employment, or upon the earnings of their children, such an arrangement would not be convenient?—No; certainly not.

344. So that you look to the improvement of the dwellings by providing a better class in the centre of London rather than in the suburbs?—Quite so.

345. Mr. *Selwyn.*] How many families did the first of the establishments which you mentioned provide for?—The nine per cent. is with reference to the single men's beds. That would be Charles-street, Drury-lane.

346. How many does that accommodate?—Eighty-two.

347. How much does the 10 per cent?—Eighty-seven rooms for families; that is another class of property which we call renovated buildings.

348. I suppose they change it frequently?—Not so frequently as in our dormitories. The dormitories are changing frequently.

349. Therefore, you must always have a certain per cent. empty?—Yes; we take an account at the end of every week, and we strike an average so as to get at what the per-centage would be of the empties, but we find a great difference in the summer, when they go out "hopping," and such like employment.

350. You are aware that, by a recent regulation, that many legal documents which were formerly written are now obliged to be printed; such as Bills in Chancery, Answers, and Affidavits?—Quite so.

351. Do you also know that these very often require to be printed with great expedition?—Yes.

352. Consequently the people sit up very late at night for the purpose of printing them?—They do.

353. Do you not think it convenient that the persons so employed should live in the neighbourhood of their employment?—If they leave their office at 12 or one o'clock, then it would not be convenient for them to live some distance away.

354. You have spoken about the vacant ground in Farringdon-street; is not a great portion of that required for the purposes of the different railway companies which are coming there?—Yes.

355. Is it not the subject of a contest between two railway companies and the City?—I am not aware of that; I only saw that there is vacant ground there. I was not aware of the purpose to which it was going to be put.

356. *Chairman.*] Have you reason to suppose that the proportion of the empties to the population resident in the houses of the Society for the Improvement of the Labouring Classes is a fair instance of the proportion which may prevail in the premises of other societies having a similar purpose?—I think that is so; all over the metropolis, there are bills to let in divers places.

357. Do you consider that the persons who will be dispossessed of their houses, will be able at a certain interval of time to find as good residences elsewhere as they have at present?—Certainly; because they would have, according to the calculation I have made, something like 18 months or two years, which is about the time it will take to purchase up the site; taking the average of 172 houses to remove them, would be about the rate of two weekly, consequently they would disperse in that number very easily, and by management, I do not believe any would be particularly inconvenienced.

358. Mr. *Selwyn*] You propose to allow two years

years for their dispersal?—It would take about two years, I should say 18 months as the average; that would remove about two weekly or a little over.

359. *Chairman.*] Do you consider that the people who live in these courts, which are described as pest houses and places rife with typhus fever, could be as badly lodged in any other part of the town that they might be likely to go to?—I know some places which are very bad, but not worse; I should think it would be a very great benefit to them, and a great many of them, I think, would improve both in morals and habits.

360. Do you think that these courts are places which ought not to be allowed to exist in a well regulated town?—Most certainly not; this by management might be a benefit to the poor; if money was advanced at 3½ per cent., I have no doubt many would take it into consideration, that is, to improve the dwellings and erect other houses; because, if they are economically erected, I am quite certain that lodging houses will pay.

361. You think they will pay a fair interest for the investment of the money?—Yes, by putting them up in a plain, simple way, and making them serviceable for the poor.

362. And by covering a valuable site with a great many houses?—Yes.

363. Do you consider that the property which lies to the west of Clement's-lane, extending towards Clare Market, has also a number of courts and narrow streets which are very prejudicial to the health and morals of those who live in them?—Yes; taking the west part certainly, and the part which was mentioned about the enlargement that might be obtained to erect dormitories or to extend your Courts.

364. Would it be a benefit to the neighbourhood of Clare Market if a better class of houses could be substituted for those already existing?—It would be most clearly a great advantage.

[The Witness withdrew.

Mr. *W. H. Hammond.*

14 March 1865.

MINUTES OF EVIDENCE

TAKEN BEFORE THE

SELECT COMMITTEE

ON THE

COURTS OF JUSTICE CONCENTRATION (SITE) BILL;

WITH THE

PROCEEDINGS OF THE COMMITTEE.

Ordered, by The House of Commons, *to be Printed*,
14 *March* 1865.

124.

Under 3 *oz.*

MINUTES OF EVIDENCE

TAKEN BEFORE THE

SELECT COMMITTEE

ON THE

MIDDLESEX INDUSTRIAL SCHOOLS BILL;

WITH THE

PROCEEDINGS OF THE COMMITTEE.

Ordered, by The House of Commons, *to be Printed,*
25 *May* 1865.

Jovis, 30° *die Martii*, 1865.

MIDDLESEX INDUSTRIAL SCHOOLS BILL.

Ordered, THAT Standing Order 193 be suspended in the case of the said Bill, and that the Bill be committed to a Select Committee of Ten Members, Five to be nominated by The House, and Five by the Committee of Selection.

Lunæ, 3° *die Aprilis*, 1865.

MEMBERS of the COMMITTEE:

Sir William Jolliffe.	And Sir John Trollope.
Lord Edward Howard.	Sir William Miles.
Mr. Cave.	Mr. Whitbread.
Mr. Baring.	Mr. Greenwood.
Viscount Enfield.	Mr. Salt.

Ordered, THAT Five be the Quorum of the Committee.

PETITIONS against the Bill referred from—

1. A. G. Fullerton and Others.
2. Guardians of Staines Union.
3. Guardians of Hendon Union.

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PROCEEDINGS OF THE COMMITTEE.

Veneris, 5° die Maii, 1865.

MEMBERS PRESENT:

Lord Edward Howard.	Mr. Whitbread.
Sir William Jolliffe.	Mr. Greenwood.
Sir William Miles.	Viscount Enfield.
Sir John Trollope.	Mr. Baring.
Mr. Cave.	

Sir WILLIAM JOLLIFFE called to the Chair.

Mr. *Liddell* and Mr. *Schomberg* appeared as Counsel in support of the Bill.

Petitions against the Bill read.

1. A. G. Fullerton.

   Counsel:—Mr. *Mathews.*

   Agents:—Messrs. *Dyson & Co.*

2. Guardians of Staines Union.

   No parties appeared in support thereof.

3. Guardians of Hendon Union.

   No parties appeared in support thereof.

Mr. *Liddell* was heard to open the case in support of the Promoters of the Bill.

Charles P. Allen and Captain *Brooks* were severally sworn, and examined.

Room cleared.—Committee deliberated.

Motion made, and question proposed, "That the Committee consider that it is inexpedient that the word 'Reformatory' should be substituted for the word 'Industrial' in the Act 17 & 18 Vict. c. 169; and that it is also inexpedient that the Secretary of State should be empowered to certify the Middlesex Industrial School under the provisions of the 17 & 18 Vict. c. 86"—(*Chairman*).—Question put—The Committee divided:

Ayes, 6.	Noes, 2.
Sir William Miles.	Lord Edward Howard.
Sir John Trollope.	Lord Enfield.
Mr. Cave.	
Mr. Whitbread.	
Mr. Greenwood.	
Mr. Baring.	

Question, "That the preamble of the Bill is proved"—put, and *agreed* to.

Parties called in and informed thereof, and of the Resolution of the Committee.

Clauses 1 and 2 read, and *disagreed to.*

Clause 3 read.

The Reverend *Sydney Turner* and Mr. *Francis Glossop* were severally sworn, and examined.

Room cleared.—Committee deliberated.

Amendment proposed in Clause 3, line 3, to leave out the word "reformatory"—put, and *agreed to.*

Clause, as amended, read, and *agreed to.*

Clauses 4 and 5 read.—Amendments made.

Clauses, as amended, read, and *agreed to.*

Clause 6 read.

The Committee deliberated.

[Adjourned till Tuesday, at Twelve o'clock.

Martis, 9° die Maii, 1865.

MEMBERS PRESENT:

Sir WILLIAM JOLLIFFE in the Chair.

Lord Enfield.	Mr. Baring.
Sir John Trollope.	Mr. Cave.
Sir William Miles.	Lord Edward Howard.

Clause 6 further considered.—Amendments made.

Clause, as amended, read, and *agreed to.*

The remaining Clauses of the Bill were severally read, amended, and *agreed to.*

MSS. Clauses A., B., C., brought up, and read.

The Petition of Guardians of Staines Union read.

Motion made, and Question—" That the 15th Clause, 17 & 18 Vict. cap. 169, be repealed, and is hereby repealed"—(Lord *Enfield*)—put, and *negatived.*

Mr. *Matthews* was heard in support of the Petitioners for whom he appeared.

Captain *Brooks,* the Reverend *Sydney Turner,* and *Francis Glossop,* were severally examined.

Mr. *Matthews* was heard to sum up the evidence in support of the proposed Clauses.

[Adjourned till To-morrow, at Twelve o'clock.

Mercurii, 10° die Maii, 1865.

MEMBERS PRESENT:

Sir WILLIAM JOLLIFFE in the Chair.

Lord Enfield.	Sir John Trollope.
Sir William Miles.	Lord Edward Howard.
Mr. Baring.	

Mr. *Schomberg* was heard against the proposed Clauses.

Captain *Brooks* further examined.

Room cleared. Committee deliberated.

MSS. Clauses A. and B. read.—Amendments made.—Clauses, as amended, *agreed to.*

MSS. Clause C. Question that this Clause C. be added to the Bill—put, and *negatived.*

Parties called in and informed thereof.

To Report.

MINUTES OF EVIDENCE.

LIST OF WITNESSES.

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Mercurii, 10° *die Maii*, 1865.

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MINUTES OF EVIDENCE.

Veneris, 5° die Maii, 1865.

THE RIGHT HONOURABLE SIR WILLIAM JOLLIFFE, IN THE CHAIR.

Mr. *Liddell,* Q.C., and Mr. *Schomberg,* appeared as Counsel for the Promoters.
Agents, Messrs. *Dorington & Co.*

The following Petitions against the Bill were read:

A. G. Fullerton and Others:
Mr. *Henry Matthews* appeared as Counsel in support of this Petition.
Agents, Messrs. *Dyson & Co.*

The Guardians of Staines Union:
No Counsel or Agents appeared in support of this Petition.

The Guardians of Hendon Union:
No Counsel or Agents appeared in support of this Petition.

Mr. *Liddell* was heard to open the case on the part of the Promoters of the Bill.

Mr. CHARLES PETTITT ALLEN, sworn; Examined by Mr. *Schomberg.*

Mr. *C. P. Allen.*
5 May 1865.

1. YOU are Solicitor for the Middlesex Magistrates?—I am.

2. In the year 1854 or 1855, was any land purchased in pursuance of the Act of 1854?—Yes, 91 acres and upwards.

3. By the *Committee.*] Can you go back a little further and show us the resolution of the magistrates which led to the purchase?—That appears in the minutes of the court, which I have not got here, but they are recited in the deed of conveyance.

4. When was it?—In 1854; I have the conveyance here (*producing it*); it recites that the general court of quarter sessions held on the 6th of December 1855, did, pursuant to the powers of the Act, approve of the contract.

5. Mr. *Schomberg.*] That was subsequent to the Act; what the Committee want is the resolution which led to the Act?—The Act is recited in the conveyance, but not the resolution; it was a resolution of the court of quarter sessions for Middlesex, passed in 1854, I believe.

6. By the *Committee.*] How was the money raised?—By a mortgage of the county rates; the first money was raised in May 1856.

7. Was that the first money that was applied to this purpose?—Yes; that was for the purchase of land.

8. And was that the first application of money for the purposes of this school?—Yes.

9. Mr. *Schomberg.*] Ninety odd acres were purchased at Feltham?—Ninety-one acres and upwards.

10. By the *Committee.*] What was the first sum raised in 1856?—£. 7,500.

11. What was that for?—For the purchase of the land; I have a list here of all the monies raised.

[*The List was handed in, and was as follows:*]

MIDDLESEX INDUSTRIAL SCHOOL.

		£.
1 May 1856 -	Borrowed - -	7,500
10 Dec. 1857 -	Ditto - - -	5,000
16 July 1858 -	Ditto - - -	10,000
16 Oct. „ -	Ditto - - -	10,000
4 Dec. „ -	Ditto - - -	5,000
2 Mar. 1859 -	Ditto - - -	20,000
26 Aug. „ -	Ditto - - -	3,000
1 Mar. 1860 -	Ditto - - -	4,000
1 May 1861 -	Ditto - - -	5,000
17 July 1863 -	Ditto - - -	2,000
15 April 1864 -	Ditto - - -	800
	TOTAL - - - £.	72,300

12. Was

Mr. *C. P. Allen.*

5 May 1865.

12. Was the whole of that money secured upon the county rate?—Yes; repayable by thirty annual instalments.

13. Were there any private contributions whatever made to the school?—None.

14. Mr. *Schomberg.*] It has hitherto been maintained solely at the expense of the county?—Yes.

15. That is its distinction from other reformatories?—Yes.

16. Do you recollect the reason why this Act was passed in the same year as that in which the General Act was passed; why the county got this Act passed, instead of coming under the General Act?—I do not know; I believe that the Secretary of State rather objected to the passing of the Act.

17. You do not know why the county did not come under the General Act which passed in the same year?—No; I believe that one reason was that under the Bill, which became a public Act, there was to be compulsory imprisonment before a child was sent to a reformatory.

18. The application of the money applied hitherto to the purposes of this school differs in no way from the application of other county monies raised for other purposes, such as lunatic asylums, and so on; the money has all been raised in precisely the same way?—Precisely.

19. And it forms no part of the county debt?—No.

20. Are you aware that various attempts were made in Middlesex to get a sufficient subscription to start one of these schools by means of voluntary contributions?—Not this school.

21. Before or about the same time, was there any attempt made on a large scale to get up subscriptions for the purpose?—No; I think not.

22. In what position would your school be, supposing this Bill did not pass the Committee?—It would then go on under the present Act.

23. Then it is not absolutely necessary for the conservation of your school that this Bill should pass?—No, certainly not; because the county rate supports the school.

24. To all intents and purposes it is a private school supported by the county of Middlesex at present?—Yes.

25. The county of Middlesex is not precluded, by having a school under this private Act, from raising rates for the purpose of maintaining juvenile offenders in other reformatories, is it?—I think it is; they have no power to raise rates except for this school.

26. Have they not power to raise rates under the General Act of 5th August 1857, which gives power to the justices of the peace to raise rates for the maintenance of juvenile offenders in reformatories?—That is for the original establishment only.

27. I do not think that Middlesex is precluded, by having this private Act, from acting under the General Act?—They do pay to some reformatories now.

28. There is a society for the assistance of discharged prisoners, and they send some boys to reformatories; there are children of both sexes in other reformatories besides this one, are there not?—Yes.

29. And the money for the purpose is raised by rate?—Yes; and the county pays so much a week towards those reformatories.

30. Under the Public Act?—Yes.

31. Out of the rates?—Yes; under the Act of 20 & 21 Vict. cap. 55.

Captain Joshua Rowland Brooks, was called in; and, having been sworn, was Examined by Mr. *Liddell*, as follows:

Capt. *J. R. Brooks.*

32. You are Superintendent of the Reformatory at Feltham?—Yes.

33. How long have you been so?—Nearly three years.

34. Are you well acquainted with the working of that reformatory?—I believe I am.

35. Is it strictly a reformatory school?—The entire discipline of the school is strictly that of a reformatory.

36. Therefore it is a misnomer, to a certain extent, to call it "industrial?"—I consider so.

37. Practically by whom are you visited at present?—By the visiting justices.

38. Have you ever had a public inspector at the school?—Never since I have been there.

39. By the *Committee.*] Has not the school been inspected by Mr. Sidney Turner?—Never since I have been there.

40. Do you think it is desirable that the school should be put under the Public Act for the purpose of public inspection?—Most desirable; I may say that once I saw the Government Inspector at his own office, and he said that he considered that his inspection would be useless, as he had no power.

41. In your judgment is it expedient that the term "juvenile offender," which is defined in the Middlesex Act as being a person under the age of 14 years, should be considered to extend to a person under the age of 16 years?—It is.

42. What is the result of your experience as to the susceptibility (so to speak) of discipline, or as to the improvement of boys between the ages of 14 and 16?—I think they are more susceptible of improvement than those that are younger.

43. Do you find that turning out a boy at an early age very often leads to a failure of the system?—An entire failure of all the instruction he has previously received; it is so much money wasted.

44. By the *Committee.*] Of course that differs with different boys?—Yes, of course.

45. But you think that when they become more able to reason they are more susceptible of improvement, than they are at an earlier age?—That is my opinion.

46. Mr. *Liddell.*] As to preliminary imprisonment, what is your opinion with regard to that?—I think it would have a very wholesome effect.

47. Do you believe that there is sometimes, now, collusion between the parents and children?—I think that is extremely probable, but I have no personal knowledge of it.

48. And inasmuch as you are of opinion that it is desirable that this should not only be defined to be, but should be made to be purely a reformatory school, do you think it advisable that the Private Act should be assimilated to the Public Act in that respect, namely, that there should be an enforced imprisonment before a boy is sent to a reformatory?—That is my opinion; I think

I think that most of the provisions of the General Act are better than our own.

49. Is there at present any mode of getting a boy changed from your school to another?—None whatever.

50. It can only be done by actual pardon?—By a free pardon, under the sign manual.

51. Would a provision of this sort enable parties of different religious denominations to remove their boys, if they thought it expedient, under an Order of the Secretary of State?—Quite so.

52. As to the extension of the period of detention, what is it at present?—A minimum of one, and a maximum of three years.

53. And that it is proposed to extend to five years, I think?—For boys under 14 years of age.

54. By the *Committee.*] Up to the age of 14?—Up to the age of 14; between 14 and 16, a maximum of three years.

55. Mr. *Liddell.*] Do you find as a rule that it requires considerable time to reform the character of those boys who are under your charge?—It must necessarily do so.

56. With regard to granting licenses to reside at places out of the school for a short time, which is provided for in the 7th clause of this Bill, you have nothing of that sort at present?—Nothing whatever.

57. That, I suppose, would be very desirable, would it not?—It is the only way in which you can test what a boy is worth before you let him go.

58. I see this Bill gives power for a committee of visitors to place a juvenile offender on trial with some person who may be willing to receive and take charge of him for a time not exceeding 30 days; would that be time, in your judgment, to test him?—If the license were renewed from time to time, which they would have undoubtedly to do under the clause.

59. The clause provides that he shall come back to the school after 30 days, and then they would have power to grant a fresh license for sending him out again?—Quite so.

60. Then there is power given to the committee of visitors to pay for such person out of the county rates; it is not necessary for me to ask you anything upon that subject; then there is a provision in the 10th section as to boys absconding, and power is given to a justice to commit him for three months, or for any period less than three months; have you any provision of that sort in your Act, or have you any way of punishing boys absconding at present?—For the first offence one month, and for any subsequent offence as much as three months.

61. You have that power already, have you?—Yes.

62. Then the only alteration is, that this extends it to any period not exceeding three months, in the first instance?—Yes, in the first instance.

63. And do you think that such a provision is desirable?—In some cases, because a boy might commit a very heavy offence, although it was his first offence, well meriting three months' imprisonment.

64. Is there any power under the present Act if the boy absconds to send him back to the school?—Yes; he returns to the school at the expiration of his term of punishment.

65. Then the only alteration in that respect is, that there is a discretion in the magistrate in the first instance to give as much as three months, if he thinks the offence deserves it?—Yes, under the amended clause.

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66. And that is in accordance with the fourth section of the General Act of 17 & 18 Vict. chap. 86?—Yes.

67. Now, as to the penalty for harbouring juvenile offenders, have you any power as to that now under your Act?—No, none.

68. That is taken from the Public Act of 19 & 20 Vict. and so on; do you think that that would be a desirable provision?—I think so; it would make parents willing to give up their children if they absconded and got secreted anywhere; they would be more likely to surrender them if they knew that there was punishment hanging over their heads.

69. The 13th section provides that the 3*s.* which you have now power to get from the parents for the maintenance of a juvenile offender, should be extended to 5*s.*, in accordance with the Public Act; do you attach much importance to that?—I think that improvident parents, if they can afford it, should be made to pay to the full extent of their means for the maintenance of their children in a reformatory.

70. By the *Committee.*] Is it the fact that they do not send the whole of the juvenile criminals in the county of Middlesex to your school?—All that are committed under our present Act are sent to our school.

71. That is under the Industrial Act?—Under our own Act; under the Act now in existence which this Bill is intended to amend.

72. Which is for an industrial school?—It is so called, but the boys are reformatory boys.

73. Other criminals in the county are sent to other schools, are they not?—No, all the criminal boys are sent to us, that is boys committed between 14 and 16 at the sessions; there is an agreement to send some boys to one or two reformatories, but all the police court cases come to us, if the boys are committed under our Act.

74. Mr. *Schomberg.*] What was meant by the question I apprehend was, whether all the juvenile offenders committed in Middlesex were sent to the reformatory?—The portion of them who are not sent is very small.

75. By the *Committee.*] Many of those who are convicted do not go to you, do they?—The girls, of course do not.

76. Are there any non-convicted boys at Feltham at all?—No, they are all under warrant of detention.

77. They are all convicted of crime?—They are all committed for an offence against the law.

78. Under the Industrial Schools Act, a magistrate may send a boy to the industrial school under a warrant of detention, simply for vagrancy, may he not?—We have boys in for vagrancy.

79. Then you have at Feltham vagrants as well as criminals?—Yes.

80. Have you boys who, if you had no Act, would be committed under the Reformatory Act, and others under the Industrial Schools Act?—Quite so.

81. What is the number of boys that you have now?—This morning there were 563.

82. What number can you accommodate?—Up to 800.

83. The nature of their offences of course, is very various?—They vary a great deal.

84. Some of them have committed crimes of considerable magnitude?—Yes, such as house breaking, and so on.

85. Can

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85. Can you give us the expenditure of the Middlesex School for the years 1862, 1863, and 1864?—No, I cannot; I can give the expenditure for 1863 and 1864, because I have the reports in my pocket. In 1863 the total amount expended was 14,367*l.* 19*s.* 11*d.* In 1864 the total gross expenditure was 14,392*l.* 2*s.* 10*d.*

86. That is covered by a rate of how much in the pound in Middlesex?—I am not aware; the county treasurer would be able to tell you that.

Mr. *Allen.*] A farthing rate would produce 10,000*l.*

87. By the *Committee.*] Have you any difficulty in placing your boys after their term is up?—We have considerable difficulty in the case of the younger boys; we have much more difficulty in placing them than we have in the case of the older ones.

88. What do you do with them if you have no place to send them to?—They return to their friends. The power of licensing would facilitate the thing very much; at present we are obliged to keep them till the expiration of their term of detention, and therefore the difficulty of providing for them afterwards is much increased.

89. Have many of them gone to sea?—No, not many.

90. Mr. *Liddell.*] You have no power now to send them to a ship reformatory?—No.

91. But under the amended Act you would have power to do so?—Yes, the Secretary of State would be able to transfer them to any reformatory.

92. By the *Committee.*] You have not sent any boys from Middlesex to the reformatory ship in the Thames?—Two or three were sent there before I was superintendent of the school, but they were taken before the court of quarter sessions first.

93. Any boys between 14 and 16 might be sent there?—No, it is to be hoped that very few boys between 14 and 16 at the school would commit an offence.

94. But boys between 14 and 16 convicted in Middlesex could be sent to a reformatory ship, or to any other reformatory, if the county had an agreement with them?—Yes, if the county had an agreement with them.

95. You cannot under your present Act make such an agreement?—It has only been made with reference to boys who have been tried at the sessions and not at the police courts.

96. Mr. *Liddell.*] A boy between 14 and 16 years of age might be sent to a ship or other reformatory, but take a boy sent to you who is only 13 years of age; you can only keep him till he is 14?—We keep him three years if he is sentenced for three years.

97. You cannot have boys sent to you if they are convicted after they are 14?—No.

The Committee-room was cleared.

After a short time the Counsel and parties were called in.

The *Chairman* stated that the Committee had agreed that the preamble of the Bill had been proved, but that they had also come to the following resolution: "That the Committee consider that it is inexpedient that the word 'reformatory' should be substituted for the word 'industrial' in the Act of 17 & 18 Vict. c. 169, and that it is also inexpedient that the Secretary of State should be empowered to certify the Middlesex Industrial School under the Provisions of 17 & 18 Vict. c. 86."

The *Chairman* also stated that the Committee felt this resolution to be so important that the Promoters ought to have an opportunity of considering whether they would proceed further with their Bill.

After a short time Mr. *Liddell* stated that the Promoters had determined to proceed with the Bill.

The Committee then proceeded to consider the clauses of the Bill.

Clauses 1 and 2 were struck out.

On Clause 3——

The Reverend SYDNEY TURNER was called in; and, having been sworn, was Examined by the Committee, as follows:

Rev. *S. Turner.*

98. HAVE you seen Clause 3 of this Bill?—I have.

99. It is proposed to extend the age of the boys to be sent to the Middlesex Industrial School to the age of 16?—It is.

100. Have you any opinion with reference to that proposal?—I cannot help thinking that it would be very objectionable so to extend the age as the school is at present constituted. The school receives both comparatively innocent and positively very guilty children. I have seen cases in which boys who have been previously imprisoned for 12 and 18 months for serious offences have been sent from the Middlesex Sessions to the Middlesex School, as having been guilty of merely petty offences, and I have seen children sent there who have been nominally but not really criminals. I cannot help thinking that it is objectionable that those two classes of children should be so much mixed together as they are in a great school, and it always seemed to me that it would be an advantage if the school were either more directly an industrial school, receiving more distinctly innocent cases, or more a reformatory school excluding innocent cases, and the evil of mixing young criminals up to the age of 14 years with comparatively innocent cases, will be aggravated if you increase the age up to 16. You will in that case have still more hardened offenders in the school, and the tone of the school will, I consider, be deteriorated, or at all events endangered, if the school is to remain on its present basis, not only as a reformatory receiving criminals, but also as an industrial school receiving light and trifling cases without previous punishment, then, I think, the present standard of age had better be retained.

101. The present standard being 14?—Yes.

102. From what prison would these juvenile prisoners be generally sent to this school?—From the House of Correction in Cold-bath Fields.

103. Have you ever visited that prison?—Not recently, but I have been there at different times.

104. Do you know whether the system that is pursued there is separate, so that these juvenile criminals

criminals are kept at work without the possibility of their communicating one with the other, or are they in association during the day?—I believe the system that is pursued there is what they call the silent system; they are associated, but silent, so that communication can, of course, take place surreptitiously. I do not think it is what is called a separate prison.

105. Are you able to state whether, in this industrial school, the classes of criminals, or those you designate as being scarcely so to be considered, are kept separate, or whether they mix indiscriminately?—I am not aware that there is any distinct classification. The school is distributed into eight or ten houses which are now made into eight, of which five or six are occupied by about 100 boys in each. I dare say a certain amount of classification would be carried out.

106. There would be a certain amount of classification with reference to their antecedents, as regards crime?—I presume so.

107. Does not that come within your knowledge, as an inspector?—I am not an inspector, properly speaking, of the Middlesex Industrial School.

108. If you have read, as I suppose you have, the next section, I should like to ask you whether it is proposed by this Bill to make the Middlesex Industrial School a pure reformatory, still continuing to it the title "Industrial"?—I think not; I believe it is meant to make it rather more so, but it still will retain the condition of children being sent there without having been sent to prison first. I believe it is distinctly understood that the promoters would wish to have the option of receiving them without their having first undergone punishment.

109. If this school is to be in future purely a reformatory, is there the same objection to the age of 16?—By no means, if it is to be purely a reformatory in the real meaning of the word, receiving none but criminals guilty of distinct offences against the law in the shape of felony or larceny, and punished before they are sent there.

Mr. *Schomberg* said he was instructed to state that the magistrates would be satisfied if a clause was put into the Bill excluding vagrants altogether, and making it apply entirely to criminals who have been convicted, and had suffered a previous imprisonment.

The *Witness.*] With reference to a previous question, I should say that the boys admitted into the industrial school are not sent from any prison at present.

110. *Committee.*] If section 4 of this Bill were passed, they would come from Cold-bath Fields, would they not?—Yes, and from Newgate in some cases. Perhaps I may be permitted to remark, that if we were to lose the industrial school as a place for the reception of light cases, we should be in a difficulty in determining what to do with those cases, and it has been a great advantage that at the Middlesex Schools they have been received.

111. Mr. *Liddell.*] I understood you to say that you would like to see the two together?—I should not like to see the industrial school element destroyed, because we are very much in want of schools for vagrants, crossing sweepers, and so on, now. The magistrates cannot send them at present. We have reformatory schools enough, but not enough industrial schools.

112. By the *Committee.*] Supposing this school is continued as an industrial school, taking in vagrants and criminals, would you have any objection to extend the age to 15 years, as is the case in the last Industrial Act?—The objection certainly would be less, but I should prefer to see it limited to 14 years. There is abundant provision for more serious cases from 14 to 16, in what are directly and specifically reformatory schools. If the magistrates of Middlesex choose, they have ample power to provide for those cases in reformatories, in and near London, which are not nearly full. Those reformatories could receive the elder boys, and could receive a great many more than they have at present.

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113. Would there be any difficulty, in your judgment, knowing what you do of reformatory schools, in taking boys between 15 and 16 years of age, and placing them elsewhere, if the magistrates should think fit to do so?—No; the only difficulty now is a pecuniary one; that the schools require a small additional payment in excess of the Government contribution, and the county magistrates have limited their contribution to cases coming from the sessions, a great majority of the cases coming from the police courts.

114. But in some cases that is not so?—No, in other counties it is different.

115. You do not consider that there is any want of means on the part of the magistrates of Middlesex, to obtain admission for this elder class of criminals in reformatory schools?—I should say not.

116. Your knowledge of the provision made for this class of criminals, enables you to say that there are means in the country of finding reformatory schools available for the purpose?—I should say so at present, certainly; whether that provision would ultimately be found sufficient, would depend on a great many circumstances; at present, however, certainly 100 boys could be taken into reformatories, which are not yet nearly full.

117. And this school has been advantageous to the county of Middlesex, as an industrial school for the reception of vagrant beggars, and persons who have committed slight offences?—Yes, I think it is of great importance that there should be such a school, and I believe that this school has done considerable service in that way; I may mention that it is rather disheartening to find with reference to reformatories in Middlesex, that the number of juvenile commitments has increased so very largely; last year the number was 400 in excess of what it was in 1863, and in 1863 the number was in excess of what it was in 1862; though not so large this year, the whole number of commitments in England would have fallen, taking the whole country, but the unfortunate exception of Middlesex raised it to between 300 or 400 more than the number in the previous year.

118. May not that be attributed greatly to the increased density of the population?—I do not see how that can be, taking one year with another; Lancashire has fallen off this year 150, and in other counties the number has decreased.

119. I do not know whether it has been brought to your attention, but it has been brought to mine, by proceedings in a court in Surrey, that the poorer class of the population of London is becoming much more dense than it formerly was, in consequence of the pulling down of houses; it was given in evidence the other day, on oath, that whereas formerly the average was two fami-

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lies in one house, the fact now is that in small houses that have been constructed in and about the metropolis, and within a few miles of it, there are now three families on an average?—No doubt anything which deteriorates the population will have a bearing on the increase of juvenile crime, but I am afraid that it is attributable either to the indifference or inability of the magistrates to use the means at their disposal; the number admitted to the reformatories has decreased within the last few years.

120. Mr. *Liddell.*] I understand you to say, that so far as the industrial element in the school is concerned, you think it desirable to limit the age to 14 years?—Yes.

121. So far as the reformatory element goes, you think it would be desirable to extend it to 16 years?—Yes, I think I may say so, cutting the age off at the other end; that is, not taking them so early as they are taken in now; it is proposed to take them in at seven years, and I should make that nine or ten years.

122. Have you any idea what practically have been the proportions of the vagrant and the criminal class in this school?—I believe that, distinguishing them specifically by those names, the proportion of the vagrant class would be very small; I take it that many boys who are now sent as criminals, who have been guilty of extremely small offences, and who have been sent to the school when very young, have been sent there more from philanthropic motives on the part of the magistrates than any other.

123. That would apply to all reformatories, I suppose?—Yes; when they have to go to prison first there is a distinct bar which parents do not like to cross.

124. That would apply to all reformatory schools under Public Acts, where 14 days' imprisonment is compulsory?—Certainly; 14 days' imprisonment has a very deterring effect on parents allowing their children to be brought before the magistrates. They would be more willing to let them go into a reformatory if there was no preliminary disgrace to be gone through.

125. Does it not lead, in some cases, to collusion between children and their parents, when parents want to get rid of their children?—That is still more the case where there is no imprisonment to alarm the child.

126. You think that an imprisonment is a desirable thing?—Yes, for the sake of society, as well as for the sake of the school.

127. Would you make imprisonment a *sine qua non*?—For all criminal cases I should make imprisonment a *sine qua non.*

128. Then, in point of fact, with regard to imprisonment, you would legislate in one way for one class, and in another way for another; and with regard to the age, as I understand you, you would do the same. You would legislate in one way for vagrants, and in another way for criminal boys?—I started by saying that I thought the mixture of the two classes was objectionable, but the proposed alteration of the age would make it still more objectionable; and if I had been consulted in the first instance, or my opinion had had any weight with the promoters, I should have said. "Do not mix them together;" but, as the school has been carried on on this large scale, I should be sorry, under existing circumstances, to lose what little advantage is gained from the industrial cases being received there, for, I think that, being few in number, they could be sufficiently separated; but, if you would give me the two schools quite separate, I should be better pleased. I may state that I always considered that the mixing of the comparatively innocent with more decidedly guilty boys, was open to great objection.

129. Was that the only ground, or had you other grounds of objection?—I objected also to the large scale upon which the scheme was going to be carried out, believing the reformatory agency was more efficient when administered on a small scale.

130. And generally with regard to the constitution of the school, did you consider that that was susceptible of great improvement?—I thought so.

131. Do you consider that a large number is more objectionable in a reformatory, than in an industrial school?—Certainly.

132. On what ground?—The moral status of the children would answer that question.

133. When did you visit Feltham last?—I was there last summer, but only for a very short time; I did not go to inspect; I have only inspected it once, I may say. There was some objection. I had to produce the Secretary of State's order to inspect, and concluding that it was not desired that I should inspect, I did not trouble them with any more visits.

134. When was that?—Four years ago.

135. What is the largest number you consider it advisable to have in a reformatory?—In an ordinary land reformatory, I should say about 150; but in a ship reformatory, from 200 to 250.

136. Still in the reformatory at Redhill there are many more, are there not?—I have always thought it a pity, since I have had more experience, that the schools at Redhill were so large; but they are so divided from each other, and distributed over 250 acres of land, that they do not interfere very much.

137. Did I not understand you to tell us that the Middlesex Industrial School was in different houses?—Yes; but they are like houses in the street, joined together in a sort of quadrangle.

138. There is a considerable quantity of ground there, is there not?—About 92 acres of ground, I am told. I beg to remove from the minds of the promoters any impression they may have that I have any desire to prevent the amendment of these Acts. The amendments which they propose, appear to me to be particularly judicious in most cases.

139. Upon the whole, you consider that the Middlesex Schools have been a useful institution?—Yes; though I think they would be more useful if they were carried on on a smaller scale in different parts of the county.

Mr. Francis Henry Newland Glossop, was called in; and, having been sworn, was Examined by Mr. *Liddell*, as follows:

Mr. *F. H. N. Glossop.*

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140. You are Chairman of the Committee of Visitors of the Middlesex School?—I am.

141. And you have heard Mr. Turner's evidence as to this question of age?—Yes.

142. Can you tell the Committee what practically has been the working of the school as regards boys who have been sent there, considering it as a reformatory school?—I do not admit that any boys have been sent to Feltham for the purpose of being treated as industrial school boys. I think Mr. Turner has not visited Feltham for a long time, and that he is under considerable misapprehension as to the class of boys that we have there: they are all juvenile offenders. Some very few boys have been sent to us as vagrants, not more than 8 per cent of the total number, but those boys are essentially of the same class as the juvenile offenders; perhaps if they had been sent the day before, or the day after, they would have been sent for felony; but on the particular day in question, the magistrate, in consequence, probably, of inquiries made of the police, has sent them to us under the Vagrant Act, they being strictly juvenile offenders, and not such boys as are contemplated under the Industrial Schools Act, which contemplates boys who are troublesome to their parents, or not manageable.

143. Is it known to the magistrates that the boys they send to Feltham are treated as boys of that class?—I presume so; I have been perfectly astounded at the misapprehension that has existed, mainly in consequence of our having given our school a wrong name, calling it an industrial school, whereas it is, in fact, a reformatory proper.

144. Your object in coming for this Bill was to make this school a reformatory, and nothing else?—Not to make it a reformatory, but to call a spade a spade; it is a reformatory; it is not our object to make it so; we wish it to be called what it really is.

145. It being a reformatory, of course the extension of the age to 16 years would be an improvement?—I think so. We endeavoured to assimilate the arrangements in our proposed Bill to the clauses of the Public Reformatory Acts, not to the clauses of the Industrial Schools Acts, but to the clauses of the Reformatory Acts, ours being a reformatory and not an industrial school. We admit that some few boys have been sent to us as vagrants, but they do not amount to more than about 8 per cent., and surely if we have to eliminate one class, it would be better to eliminate the smaller class and not the larger; not the 92 per cent. but the 8 per cent.

146. By the *Committee.*] Is previous imprisonment an element which you think desirable with regard to the criminal class. In order to make it a reformatory school, do you not think that previous imprisonment should be a necessary condition to the admission of a boy?—I think that the majority of the promoters of the Bill are decidedly desirous of enforcing previous imprisonment. I confess that individually my opinion is not strong upon that point; I see strong arguments either way. On the one hand I think that previous imprisonment is correct in principle, and that a boy who commits an offence should be punished before you attempt to reform him. It also deters parents from collusion; we have had some very suspicious cases; we have even had three brothers in one family, which looked as if the parents thought that the boys were well taken care of at Feltham, and that they had no objection to their children being sent there. A large proportion of the boys now at Feltham have been imprisoned before they went there, and therefore it would do them no great harm, if they commit another offence, to go to prison again before coming to Feltham.

147. Do you contemplate in the school at Feltham that you are to continue to receive, direct from the magistrates' courts, persons sent for acts of vagrancy, as rogues and vagabonds, for begging, and so on. Do you contemplate continuing to receive persons of that class, as well as those who have undergone a previous imprisonment for offences against the law?—Individually, I should prefer not having boys sent for vagrancy, although I do not admit that practically there is any great distinction between them and boys who are sent as criminals.

148. Is it intended to persevere in receiving, as you do now, both classes?—If this Act is passed they must be sent to prison first.

149. Can you, under Clause 4 of this Act, send any boy to the school, as it will be constituted under this Act, who has not been first imprisoned?—I think not.

150. You would abandon the present practice, therefore, of sending boys without previous imprisonment?—If that clause passes; the intention of the majority of the promoters was that it should be compulsory upon the magistrates; we do not put in the word "shall"; if we had done so, the boy must have been sent to Feltham; but it was intended that the magistrates should have the power of sending the boy to prison for 14 days and then sending him to Feltham, but it was not contemplated that the boy should be sent to Feltham direct.

151. By repealing the 35th section of the old Act, you take away the power to send a boy without previous imprisonment?—Yes.

152. And so the objection to the age of 16 years, which is founded on the admixture of the two classes, would drop?—Yes.

153. In those cases in which you suspected collusion with the parents, did you not enforce the rate which you have the power of levying from parents?—The power of enforcing payment from parents has been found in practice to be very defective; I think it is extremely important that that power should be amended; practically, it is left in the hands of the county treasurer, and when he has endeavoured to put it in force, he has been referred to some Act of Elizabeth, and the power has been practically inoperative.

154. It has been almost found to be a dead letter?—Not exactly, but the amount collected from parents is very trifling.

155. Mr. *Liddell.*] Is not this very much the case, that if this school is to be kept as an industrial school, all these provisions are useless whereas if it is to be made a reformatory school, then they become very material?—I do not care what it is called; you may call it an industrial school, or you may call it by any other name you like. If it is to be an industrial school proper, according to the definition of an industrial school in

Mr. *F. H. N. Glossop.*

5 May 1865.

the Act of Parliament, then this is all useless, and we must in some way get rid of nine-tenths of our boys.

156. Hitherto it has not been used as an industrial school proper, but as a reformatory?—It has been used as a reformatory.

157. By the *Committee.*] But surely upon the evidence before us it has been a mixed school?—My full belief is that children are sent to Redhill under the Vagrant Act.

158. After imprisonment?—After imprisonment.

159. But you have power in the present Act to send boys to the school without previous imprisonment?—Yes, but what I say is this, that we do not have such boys as are contemplated by the Public Industrial Schools Act.

160. The very words in the Act are, "who have committed acts of vagrancy"?—Yes, but the boys who have been sent for having committed acts of vagrancy, if they had been sent the day before, or the day after, would probably have been sent for felony.

161. Under this Bill, supposing it to pass, you will not be able to receive any boy without previous imprisonment?—No.

162. You would get rid of the vagrant class if this Bill were passed, would you not?—I presume it would have that effect.

163. And the object of the majority of the promoters of the Bill is to make this school purely a reformatory, and not an industrial school?—Yes.

The Committee-room was cleared.

After a short time the Counsel and parties were called in.

The Chairman stated that the Committee had agreed to pass Clause 3, with certain amendments which they had made therein; Clauses 4 and 5 were read and passed, with amendments; and the Committee proceeded to consider Clause 6.

[Adjourned to Tuesday next, Twelve o'clock.

Martis, 9° die Maii 1865.

THE RIGHT HONOURABLE SIR WILLIAM JOLLIFFE, IN THE CHAIR.

THE remaining Clauses of the Bill were considered and passed with amendments.

The Petition from the Guardians of the Poor of Staines praying for the repeal of the 15th Clause of the Act of 17 and 18 Vict. c. 169, was read.

Lord *Enfield* moved that a Clause be added to the Bill repealing the Clause of the Act in question.

After some discussion Lord *Enfield* withdrew his motion, and the following Clause was added to the Bill, "That section 15 of the 17 & 18 Vict. c. 169, shall not apply to any lands or buildings acquired, or to be acquired, without the limits of the county of Middlesex."

Mr. *Matthews* was heard, on behalf of the Petitioners for whom he appeared, to propose the introduction of certain clauses.

CAPTAIN JOSHUA ROWLAND BROOKS was called in; and Examined by Mr. *Matthews*, as follows:

Captain *J. R. Brooks.*
9 May 1865.

164. YOU gave us the other day, I think, the total number of boys in the schools, as 550?—Yes.

165. How many of those are Roman Catholics?—About 70.

166. Somewhat more than 70, I believe?—Not 80; between 70 and 80.

167. How many are Jews?—Five.

168. Of those Roman Catholic boys, how many are visited by a priest?—Thirteen; there may be 14; it is impossible to be quite sure, 13 or 14.

169. Do all of them, including those 13 or 14, attend the service of the Established Church on the Sunday?—They do.

170. And all learn the Church Catechism?—They are all instructed by the chaplain of the school.

171. Including the Jews?—Yes.

172. With reference to boys sent from Quarter Sessions or the Central Criminal Court, are they sent without any description of the religion to which they belong?—Yes.

173. There is no provision of the original Act requiring the religion of the boy to be specified in the list?—There is not; but we do take the religious denomination either from the magistrate's paper, or the paper of the Central Criminal Court; or we ascertain it from the boy as well as we can.

174. I believe Feltham school was built in sections?—Yes.

175. That is, completely different establishments or houses forming the whole body of the school?—Yes.

176. So that in the different sections a different number of boys might be treated separately from the others, without any inconvenience to the establishment?—It is quite possible.

177. Indeed, the school was designed, I believe, with that view, was it not. I am speaking of the building. It was designed for the very purpose of dividing the boys into classes separate from each other?—It was so designed.

178. Is there abundant space in the building for such an object; for instance, as performing Divine service on Sundays, according to the Catholic ritual?—I do not think there is a building properly adapted for the purposes of a chapel.

179. But there are vacant rooms that might be adapted to that purpose?—No; because two vacant rooms have recently been opened into a carpenter's shop.

180. But could room be found for that purpose, without difficulty?—The school rooms are vacant, of course.

181. From your experience in reformatories, do you consider it a matter of great importance that the children brought to you should be instructed by a clergyman of the religion to which they themselves belong?—I consider it very important that a boy should be instructed in religion.

182. But is it of importance that he should be instructed by a clergyman of the religion to which his previous notions incline him?—Our boys have so very little knowledge of any religion, except the name, that they have no preconceived notions on the subject. They have never been brought up in any religion; it is, therefore, beginning at the beginning.

183. By the *Committee.*] Do you speak of the generality of them?—Yes.

184. Mr. *Matthews.*] Supposing them to have any religion of their own, would it be desirable, for the purpose of reformation, that they should see a minister of that religion?—Yes, I should think so.

185. Suppose you had a given number of boys at school, professing a religion different from that of the Established Church, do you think if they were regularly visited by a chaplain of that religious denomination it would promote the objects of the school?—Yes, if they were not taught two different things; one thing on the Thursday and another on the Friday, opposed to that which had been taught on the Thursday.

186. It is undesirable that they should be taught one religion on the Saturday and go to a church which teaches them a different one on the Sunday?—Yes.

187. That

Captain *J. R. Brooks.*

9 May 1865.

187. That tends to unsettle the boy's mind?—Yes, and he does not learn anything.

188. Suppose a body of boys, say 30, were put together in one section, and placed under a separate schoolmaster of their own religion, would that be adding materially to the expense of the school?—Yes, because there is a schoolmaster for every 50 boys.

189. And are there no helps in the establishment?—There is a schoolmaster and an assistant for every 75 boys, it used to be 50.

190. It used to be one for 50?—Two for 50.

191. By the *Committee.*] You say that the boys are instructed in religion by the schoolmaster and chaplain?—Yes.

192. How far do they go in religious instruction?—That is a question more proper for the chaplain to answer.

193. Take a Jew, for instance. You instruct the boy, who is a Jew, in the Creed, for instance; suppose he did not learn it, is there any school punishment?—I think there is a punishment.

194. Then the practice is to punish a Jew for not learning the Apostolic Creed?—I do not say that it is the practice.

195. Would it be treated as any other task?—Yes.

196. I think I understood you to say that the school is divided into sections?—Yes.

197. How many boys are there in each section?—It used to be in sections of 50, but we have since broken through division walls, and thrown the school into sections of 150.

198. Suppose the Committee should think it right, there would be no reason at all why, at very little expense, you should not put the walls up again and divide into sections of 50 again?—We could do so.

199. And that at a moderate expense?—Yes.

200. Will you be kind enough to tell us what rooms you had that used to contain 50?—The school room, the dormitory, a washing room, a sitting-room for the officer, and a bed room for the officer, and two others.

201. Then there would be no objection, suppose the Committee should think it right, to use the school room, not only for instruction, but as a chapel for Divine service?—Quite so.

202. And it would put the Middlesex magistrates to little or no expense in so arranging one of the sections as to fit it for public worship for the Roman Catholic boys?—It would be an expense, but not extraordinary.

203. There are 13 or 14 Roman Catholic boys who receive instruction from their own priest?—Yes.

204. Did they make the application for the purpose, or did the parents do so, or how was it done?—As a rule it was the parents; in three or four instances it was the boys themselves.

205. Have any of the 13 ever made any application?—Yes, three or four.

206. But in the majority of instances it was the parents?—Yes.

207. By writing?—Yes.

208. And it has never been refused?—Never.

209. This instruction is never given except upon application?—Not otherwise.

210. You do not extend it to those whom you know to be Roman Catholics, but who do not apply?—There are rules which allow boys to apply, which are hung up in every school room.

211. In the case of the five Jews, was any application made by their parents?—No; but at the instance of a gentleman who applied, the request was granted. The committee instantly complied.

212. But they attend the chapel all the same?—Yes.

213. If a Roman Catholic priest were to apply to be allowed to see the Roman Catholic boys, would that be allowed?—I cannot say.

214. Has any application ever been made by a Roman Catholic priest in the neighbourhood to visit the boys of his own persuasion?—Not to my knowledge.

215. But suppose it were done?—It might be.

216. Mr. *Matthews.*] Do not you know that Mr. Hurdle did apply, and was met with a refusal?—I do not think he applied for general permission, but only to see certain boys.

217. Was that declined?—No, I think that was accorded.

218. By the *Committee.*] I think I understood you to say that these 13 or 14 boys who had some Roman Catholic religious instruction given to them, were treated in all other respects as the Protestant boys were?—Yes.

219. And therefore there would not be much use in a Roman Catholic priest attending?—It would hardly be likely to do the boys good.

220. On what principle are the boys entered. Is it according to the religion of their parents?—It is very difficult to find out. It is a rule that the magistrates state it on the description paper, that the boy is a Protestant or a Roman Catholic, or a Jew, or a Dissenter. Or if he comes from the Quarter Sessions, or the Central Criminal Court, we find out for ourselves; but we find it difficult to ascertain sometimes, and then we class them as doubtful.

221. And those you send to the Established Church?—Yes.

222. Are any Dissenting ministers allowed to see the boys?—I am not aware of any such application.

223. Are there any who ever come into the schools?—No. The number is small.

224. Have you had any application from a Dissenting Minister relating to the Catechism of the Church of England?—Not that I am aware of.

Cross-examined by Mr. *Schomberg.*

225. Almost all the questions put to you by the Committee are what I intended to ask. As a rule, do you not find that practically most of the boys have no religion at all?—None whatever, so to speak, except the name.

226. With regard to the Roman Catholic boys being put into a room by themselves, divided off, how about their going out to exercise?—I did not apprehend that the questions put to me by the Learned Counsel applied to anything but religious instruction. It would be extremely difficult to have a Roman Catholic tailor and a Roman Catholic labour master, and so on. That would be extremely difficult to arrange.

227. How would they go out for exercise, or to do work. Would it be an inconvenience to you to have a class of boys set apart only to go out for exercise, or to work by themselves, instead of mixing with the other boys?—Yes; very.

228. And that would be attended with additional expense?—It would, because we should have to engage additional officers.

229. By

Captain *J.R.Brooks.*

9 May 1865.

229. By the *Committee.*] Taking those 80 Catholic boys; if they were merely separated for religious instruction, there would be no difficulty?—No insurmountable difficulty.

230. Not as far as their instruction is concerned?—As far as their religious instruction is concerned; but as to the appointment of officers to instruct them, there might be some difficulty.

231. You say there is one instructor to 50 boys, or one to 75. Suppose there were a Roman Catholic instructor put to one lot of 75, he might just as well be employed as a Protestant?—Yes.

232. There would be no difficulty when the priest attended, because in all probability, at the time the Church of England service was going on, if a room were set apart entirely for the Roman Catholic worship, that might go on as well?—If he attended at the same hour for instruction and the same hour for worship.

The Reverend Sydney Turner was then called in; and Examined by Mr. *Matthews*, as follows:

The Rev. *S. Turner.*

233. According to your judgment in reformatory matters, is it beneficial to give the boys religious instruction in that religion to which they belong, and which they respect?—It is very essential to give them a thorough religious instruction, but I am not quite sure whether every particular article of the creed of the religion he belongs to, would be an essential point of instruction.

234. But without going into details, a religious teaching would be more acceptable amongst juvenile offenders, coming from those who are supposed to belong to their own religion?—It is so, I should say.

235. As a matter of fact, separate religious instruction is given to Roman Catholic boys in some reformatories?—Only in one; that is the North Eastern, near Morpeth, in Northumberland. There are from 20 to 30 Catholic boys there, and the priest visits the house once or twice in a week at his pleasure, from Morpeth, and they go to a meeting at Morpeth, under proper surveillance, and are brought back again, otherwise there is no distinction made.

236. Is there not an example in Scotland?—There is no reformatory in Scotland. There is an industrial school in Edinburgh, in which there are 90 Roman Catholics in addition to 60 or 70 Protestants. Some are boarders, and some only day scholars. With reference to instruction, the first hour of the morning, from 9 to 10, is devoted to religious instruction, and there is a Catholic teacher engaged. He takes the Catholic children while the Protestant superintendent takes the Protestant children; but during some period after that, the children mix together, and no distinction is made in their tuition, or work, or meals, or play.

237. And what is the provision for the Catholics on Sundays?—They are taken to the Catholic Church sometimes, by their friends, on a guarantee of their being brought back safe; there is a similar example at York. The school there receives Roman Catholic children and Protestant children, and there are similar arrangements, except that there is no Catholic teachers, for the number is small, 12 or 14; and all the industrial schools established under the Industrial Schools Act of 1861, are established with a condition by the Secretary of State, as far as it can be made a condition with voluntary agents, that in case of Roman Catholic children being admitted, provision shall be made for their instruction on Sunday. If the schools decline to accede to that, I understand they are not to receive them.

238. By the *Committee.*] And it is part of your duty to see that the arrangement is made?—To see that it is carried out.

239. How is the religion of the boys known?—Usually it is noted in the commitments or the order by the magistrates; but if not, it is immediately ascertained at the school.

240. Is it statutory that the magistrates shall select a school where the religion of a boy is taught. We hear that many of the boys are sent in almost accidentally, without any religion being assigned. Is there any provision in those reformatories for a boy being permitted to say, although he has been enrolled as a Catholic, he is a Protestant?—Yes, he would immediately claim to be instructed according to his own faith. I do not think that there is quite so much indifference as to these matters as has been represented.

241. Suppose a boy has been in the school for two years, and wishes to change his religion and become a Roman Catholic?—He might by petitioning the Secretary of State be removed to a Roman Catholic school, or *vice versâ*; but if he has been for two years in the school, I should have great difficulty in recommending it, for there would be more danger than in allowing him to remain for the short time he would have to stay.

242. But in the schools where there are both religions taught, could the children at any time say that they wished to discontinue to receive instruction in one religion, and receive it in the other?—They could, but I do not know of any examples, except one.

243. There is nothing to prevent it?—No.

244. And such scruple would be attended to by the managers of the reformatory?—If not, the boy would have the option of representing it to me, or through his parents to the Secretary of State, and could have the case inquired into, and the proper facilities given.

245. Of course Protestants and Roman Catholics have some prayers very much in common; for instance, the Apostles' Creed; but there are other prayers which one would say and the other would not; the Hail Mary, for instance. It is also a custom among Roman Catholics to sign themselves with the sign of the cross. Is it within your knowledge that many of these children called Roman Catholics who come into these reformatories and industrial schools make the sign of the cross, and thus distinguish themselves by a religious ceremony or symbol from the Protestant children?—Certainly.

Cross-examined by Mr. *Schomberg.*

246. Is there not a Roman Catholic reformatory in Middlesex?—Yes, at Hammersmith.

247. Where the boys of that class could go?—If they were committed under the Reformatory Schools Act to that school, and the managers

The Rev. *S. Turner.*

9 May 1865.

were able either with regard to space or funds to receive them; at present it is not so.

248. By the *Committee.*] It is a private reformatory, is it not?—It is one of the ordinary reformatories established under the 17 & 18 Vict. cap. 86, by voluntary contribution in the first instance, and supplemented by a grant.

249. They have a maintenance grant now?—Yes, 6*s.* a week.

250. Is that so full or so poor that they cannot receive any more?—It is so full.

251. What number does it hold?—About 100.

252. Mr. *Schomberg.*] Are there not others in England?—There are three in England; one in Yorkshire; there is St. Bernard's, but that is restricted to 150 at present; and the Clarence ship; we cannot get more than 50 or 60 boys there at once.

253. With regard to the boys who make the symbols of the Roman Catholic faith, you mean those boys who have been instructed in the Roman Catholic religion, or do you mean those who come in the first instance?—When they come, if I want to ascertain whether they are Roman Catholics, I should ask them to bless themselves, and I should know by the words used to which religion they belonged.

254. Are you always present?—I have seen some hundreds myself, and frequently now see them. You might know a Protestant boy at once, for as a rule he has no outward signs of religion any more than he has inward convictions, but a Roman Catholic boy, although he may not have inward convictions, has always an outward sign.

255. By the *Committee.*] If he has received any instruction at all?—He would be certain to have been instructed in certain habits or to have acquired certain habits, to use his fingers and make the cross and be able to say the "Hail Mary," probably.

256. Suppose you have 75 Roman Catholics to provide for, should you in the existing reformatories for Roman Catholics have a difficulty to place them to advantage?—Yes, it is quite as much as we can do to provide for those we have at present.

257. With regard generally to Catholic children, do you find that they are amply supplied with religious instruction in their own creed?—In Catholic schools.

258. Generally speaking, taking the whole class of boys in reformatories, is there provision made that is sufficient, in your opinion, for the instruction of Catholic children?—As a rule Catholic boys would be excluded from Protestant reformatories; managers would not take them to proselytise them unawares.

259. At Morpeth they have made provision for that?—Yes.

260. But that is not done generally?—No.

261. So that the want of arrangement tends to deprive the Roman Catholic children of the advantages of these establishments?—No doubt; at the outset of the work it was a great question whether we should establish reformatories upon the mixed principle or the separate principle, and after a good deal of discussion it was thought best to adopt the separate system, and it is quite an exception when there is an infraction of that rule.

262. Are those Catholic schools that are established sufficient for that class?—Hardly so; we want another, I think; there are Market Wheaton, St. Bernard's, and the Clarence ship; they contain altogether upwards of 600 Catholic boys; there are 200 in Scotland.

263. Mr. *Matthews.*] The juvenile criminals in Middlesex are about one-third the total juvenile criminals in England?—About that; this year there were about 1,800.

264. By the *Committee.*] Taking the state of the Middlesex Industrial School as you have heard it given in evidence, and considering the number of Roman Catholic boys, do you think that a separate worship should be established for those boys?—I do not see that there would be any insuperable difficulty in making such a provision for them, or that it would materially interfere with the school, or be itself objectionable.

265. Do not you think it would add very much to the morality of the school if such a provision were made?—It would be more beneficial for the boys to be instructed in the principles of their own faith, and not to be made partly to learn the doctrines of a different faith. I do not see why they should be compelled to learn the Protestant catechism or attend Protestant religious services if they are Roman Catholics; in old times I had a good many of these boys at Red Hill, and we adopted the principle that no religious teaching should be given them; they were not required to learn the Catechism, and there was no Catholic chaplain in the neighbourhood to which they could have gone.

266. But had there been one you would have preferred sending them to him?—I should have preferred it myself, but I am not sure that the managers at Red Hill would have assented to that; they would rather have said, "Take the Roman Catholic boys away;" but there is a vast deal to be done in simple elementary religious instruction which does not interfere with the specific points of faith.

267. Would not greater religious instruction be likely to add to the discipline and efficiency of the school?—It would remove the notion of injustice, for a boy can scarcely feel himself justly treated in being made to worship as a Protestant any more than I should if I were in any place abroad, and made to be an apparent convert to the Roman Catholic faith.

268. You have seen Feltham School?—Yes.

269. And you are not aware of any difficulty in carrying out such an arrangement as I have mentioned?—There would be no difficulty in their having a Catholic officer, and attending Catholic worship.

270. By the *Committee.*] By Catholic officer, you mean an instructor?—Yes. I do not think it would be possible to have a Catholic clergyman and a Protestant clergyman at the same time.

271. But a Catholic clergyman might give every requisite instruction?—Yes.

Mr. Francis Henry Newland Glossop, re-called.

272. By the *Committee.*] There appears to be a doubt whether Mr. Hardle actually did make an application to attend the Catholic boys?—I cannot call to mind any such application having been made. I know that the committee have been very careful to obey strictly the clause of the Act of Parliament, which requires them to permit visits whenever the boys or the parents request it; and in the case of the Jews we have rather exceeded our instructions.

273. Captain Brooks stated that if an application had been made, it would have been granted; is that your impression?—Yes.

274. Mr. *Matthews.*] But does not the Act of Parliament require that it shall be made by the parents, or the boy, or some one on his behalf?—Yes.

275. Do not you adhere to the Act of Parliament?—Yes; but in the case of the Jews we have opened the door a little wider.

276. But in the case of the Roman Catholics, the request must be made in a letter addressed to the superintendent?—I am not aware that that is the precise form, but the application must be made.

277. By the *Committee.*] Do you or not agree with Captain Brooks in thinking that if an application had been made that a priest should be allowed to visit certain boys, it would have been granted, as in the case of the Jews?—I think it would. I, as a member of the committee, should have held up my hand for it.

278. Mr. *Matthews.*] Have you ever known of a case in which that application not supported by the parents, has been allowed by the committee?—I am not aware of it; or perhaps I should say that I am not aware of its having been brought before the committee.

279. By the *Committee.*] Are you in your school acquainted with the different religions of the boys who come in the way that has been pointed out?—No; I was not aware of the test mentioned. My impression has been the same as Captain Brooks', that really the poor boys sent there are practically of no religion at all.

280. But you have between 70 and 80 boys who are known to be Roman Catholics?—Supposed to be Roman Catholics; I really think if their name happens to be Irish, we take it for granted.

281. And of that number, 13 or 14 are allowed to see a Roman Catholic minister?—Yes.

282. Then, suppose an application were made by that minister, who must be recognised, to see the balance; that is, the difference between 13 or 14 and the 70 or 80, would he be permitted to see them?—It is impossible that I can pledge myself to anwer that question, because I am only one of a committee of 20. I certainly should hold up my own hand in favour of the application; and I am not aware that any such request has been brought before the committee and refused.

283. No doubt your action in the matter would be important, because being the chairman you must be impressed with the necessity for discipline at the school; but may I ask you what you think would be the decision of the committee if such a request were made?—It is very difficult to anticipate what an accidental majority of a large committee might do.

284. At all events, you have given more liberty to the Jews than to the Roman Catholics?—Simply because I believe the application came from a gentleman calling himself the Secretary to the Jewish Association. It came before us, and it was at once granted; and I am not aware that any similar application has ever come from any Roman Catholic body, or any person interested in the matter.

285. Then, if these 70 (or nearly so) children who are not attended by the Roman Catholic minister should be Roman Catholics, you will admit that they labour under a great disadvantage, and require that some consideration should be bestowed upon them, they not being permitted to see the minister of the religion they affect?—I do not quite admit that, because in the 13 or 14 cases where permission has been asked and given, the Roman Catholic minister has, on very rare occasions, availed himself of the privilege; and I am not aware that any good result has attended his visits; on the contrary, I have heard of his visiting and declining to see many of the boys whose names were on the list.

286. If he understood that, notwithstanding he was allowed to see the boys, they were subjected to the same treatment in the school as the Protestant boys, would it be of much good for him to continue his ministrations, or to take much trouble in the matter?—No, I should say that the object of the minister would be better attained if the boys were removed to a Roman Catholic Reformatory.

287. Or being attended to by a minister of their own received persuasion?—I think it would be attended with great disadvantages.

288. I did not ask that; but whether it would not be for the benefit of the Roman Catholic boys that they should be placed on one side in order that they might be attended by a minister of their own persuasion, and not mixed up with the other boys?—That is a matter of opinion.

289. I understand you to say that it would be so in other places than Feltham School; but religion is the same everywhere; and I should have thought that if it were beneficial anywhere, it would be so at Feltham?—It would not be for the benefit of the boys to find that they were being brought up in all other respects the same as the rest, but that in matters of religion they were separated, the Roman Catholics being marched off in one direction and the Protestants in another.

290. Then you think that the balance of the 70 or 80 boys who are not seen by the minister are better off than the 13 or 14 who are?—Under existing circumstances I think they are.

Mr. *Matthews* was heard to sum up the evidence in support of the Clauses which he proposed to have inserted in the Bill.

| Adjourned to To-morrow, at 12 o'clock.

Mercurii, 10° *die Maii* 1865.

THE RIGHT HONOURABLE SIR WILLIAM JOLLIFFE, IN THE CHAIR.

Mr. *Schomberg* was heard against the insertion of the Clauses proposed by Mr. *Matthews*.

CAPTAIN JOSHUA ROWLAND BROOKS, re-called.

Captain *J. R. Brooks.* 10 May 1865.

291. By the *Committee.*] WHAT do you say as to the number of Roman Catholics?—You must divide and classify them under two heads; first, those who come from the Central Criminal Courts, County Sessions and Petty Sessional Benches, and secondly, those who come from the Police Courts. Those who come from the Police Courts bring a descriptive paper, in which the magistrate has described the religious denomination, but those who come from the Central Criminal Court and County Sessions are examined by myself or the clerk, and we classify them according to the best of our ability. I assign to him that denomination which, as far as I can judge, he appears to be.

292. If he calls himself nothing, he is assumed to belong to the Established Church?—Yes; I write him "unknown," but he of course is instructed in the Established doctrine.

293. You have put down none, except those entered as Roman Catholics, and those who when they come from the Central Criminal Court and County Sessions, describe themselves as Roman Catholics?—No.

294. What is the average number of Roman Catholics during the last three years?—The average number has been about 75.

The Committee Room was cleared.

The Counsel and parties were again called in.

Clauses A. and B. were passed with Amendments.

Clause C. was struck out, and another Clause added by the Committee.

The Chairman was directed to Report the Bill, as amended, to The House.

MINUTES OF PROCEEDINGS

OF THE

SELECT COMMITTEE

ON THE

PRISONS BILL.

Ordered, by The House of Commons, *to be Printed,*
11 *May* 1865.

Mercurii, 8° *die Martii*, 1865.

Prisons Bill read 2°, and committed to a Select Committee.

Lunæ, 13° *die Martii*, 1865.

Select Committee nominated of—

Sir George Grey.	Mr. Hunt.
Mr. Adderley.	Sir William Miles.
Mr. Beach.	Sir John Pakington.
Mr. Henley.	Mr. Joseph Ewart.
Mr. Hibbert.	Mr. Walter.
Mr. Hardy.	Mr. Perry Watlington.
Mr. Hanbury.	Mr. Whitbread.
Lord Edward Howard.	

Ordered, THAT the Committee have power to send for Persons, Papers, and Records.

Ordered, THAT Five be the Quorum of the Committee.

PROCEEDINGS OF THE COMMITTEE.

Martis, 14° *die Martii*, 1865.

MEMBERS PRESENT:

Sir George Grey.	Mr. Walter.
Sir John Pakington.	Mr. Whitbread.
Sir William Miles.	Lord Edward Howard.
Mr. Adderley.	Mr. Joseph Ewart.
Mr. Perry Watlington.	Mr. Hardy.
Mr. Hunt.	

Sir GEORGE GREY was called to the Chair.

The Committee deliberated.

[Adjourned till Thursday next, at Twelve o'clock.

Jovis, 16° *die Martii*, 1865.

MEMBERS PRESENT:

Sir GEORGE GREY in the Chair.

Mr. Henley.	Mr. Walter.
Mr. Adderley.	Sir William Miles.
Mr. Whitbread.	Mr. Beach.
Mr. Joseph Ewart.	Mr. Perry Watlington.
Mr. Hibbert.	Mr. Hunt.
Mr. Hanbury.	Lord Edward Howard.
Sir John Pakington.	Mr. Hardy.

The Committee proceeded to the consideration of the Bill.

The Preamble was postponed.

[Adjourned till Monday next, at Twelve o'clock.

Lunæ, 20° *die Martii*, 1865.

MEMBERS PRESENT:

Sir GEORGE GREY in the Chair.

Mr. Henley.	Mr. Perry Watlington.
Mr. Joseph Ewart.	Sir John Pakington.
Mr. Hibbert.	Mr. Walter.
Sir William Miles.	Mr. Beach.
Mr. Hardy.	Mr. Whitbread.
Mr. Hunt.	Lord Edward Howard.
Mr. Adderley.	Mr. Hanbury.

The Committee deliberated.

[Adjourned to Thursday next, at Twelve o'clock.

Jovis, 23° *die Martii*, 1865.

MEMBERS PRESENT:

Sir GEORGE GREY in the Chair.

Mr. Walter.	Mr. Hunt.
Mr. Perry Watlington.	Mr. Beach.
Mr. Whitbread.	Sir William Miles.
Mr. Joseph Ewart.	Mr. Hibbert.
Lord Edward Howard.	Sir John Pakington.
Mr. Henley.	

The Committee deliberated.

[Adjourned to Monday next, at Twelve o'clock.

Lunæ, 27° *die Martii*, 1865.

MEMBERS PRESENT:

Sir GEORGE GREY in the Chair.

Mr. Henley.	Mr. Perry Watlington.
Sir William Miles.	Mr. Hunt.
Lord Edward Howard.	Mr. Walter.
Mr. Hardy.	Sir John Pakington.
Mr. Joseph Ewart.	Mr. Whitbread.
Mr. Hibbert.	Mr. Beach.

The Committee deliberated.

[Adjourned to Thursday next, at Twelve o'clock.

Jovis, 30° *die Martii*, 1865.

MEMBERS PRESENT:

Sir GEORGE GREY in the Chair.

Mr. Henley.	Mr. Beach.
Mr. Hibbert.	Mr. Walter.
Lord Edward Howard.	Mr. Whitbread.
Sir William Miles.	Sir John Pakington.
Mr. Perry Watlington.	Mr. Hunt.
Mr. Joseph Ewart.	Mr. Hardy.

The Committee deliberated.

[Adjourned to Thursday, 27th April, at Twelve o'clock.

Jovis, 27° die Aprilis, 1865.

MEMBERS PRESENT:

Sir GEORGE GREY in the Chair.

Mr. Henley.	Mr. Perry Watlington.
Mr. Hibbert.	Sir William Miles.
Lord Edward Howard.	Mr. Beach.
Mr. Joseph Ewart.	Mr. Whitbread.
Mr. Walter.	Mr. Hunt.
Sir John Pakington.	Mr. Hardy.

Clause 1, agreed to.

Clause 2, amended, and agreed to.

Clause 3, agreed to.

Clauses 4 to 14, amended, and agreed to.

Clause C., disagreed to.

Clause 15, amended and agreed to.

Clause 16, disagreed to.

Clause D., amended, and agreed to.

Clause 17, amended, and agreed to.

Clause 18, disagreed to.

Clause A.—Amendment proposed, in line 3, to insert after the words "stone breaking," the words "rope beating"—(Mr. *Beach*).—Question put, That those words be there inserted.—The Committee divided:

Ayes, 3.	Noes, 9.
Lord Edward Howard.	Mr. Henley.
Mr. Beach.	Mr. Hardy.
Sir John Pakington.	Mr. Whitbread.
	Mr. Joseph Ewart.
	Mr. Hibbert.
	Mr. Hunt.
	Mr. Perry Watlington.
	Sir William Miles.
	Mr. Walter.

Another Amendment proposed, in line 7, to leave out the words "oakum picking"—(Mr. *Whitbread*).—Question put, That the words proposed to be left out stand part of the Clause.—The Committee divided:

Ayes, 5.	Noes, 7.
Mr. Hunt.	Mr. Henley.
Lord Edward Howard.	Mr. Hardy.
Mr. Beach.	Mr. Whitbread.
Sir William Miles.	Mr. Joseph Ewart.
Sir John Pakington.	Mr. Hibbert.
	Mr. Perry Watlington.
	Mr. Walter.

Other Amendments made.—Clause, as amended, agreed to.

Clause 19, agreed to.

Clause 20.—Amendment proposed, to leave out all the words from the commencement of the Clause to "and" in line 4, in order to insert the words, "The Dietaries laid down in the Schedule shall be used in all prisons; but should the Justices in Quarter Sessions assembled consider that Articles of Diet other than those contained in the Dietaries laid down in the Schedule may be more advantageously used in their respective prisons, they may, with the consent of the Secretary of State, use equivalent Articles of Diet"—(Sir *W. Miles*)

W. Miles)—instead thereof.—Question put, That the words proposed to be left out stand part of the Clause.—The Committee divided:

Ayes, 10.	Noes, 2.
Mr. Henley.	Lord Edward Howard.
Mr. Hardy.	Sir William Miles.
Mr. Whitbread.	
Mr. Joseph Ewart.	
Mr. Hunt.	
Mr. Beach.	
Mr. Perry Watlington.	
Mr. Walter.	
Sir John Pakington.	
Mr. Hibbert.	

Another Amendment proposed, in line 10, to insert after the word "section," the words "Provided that each convicted criminal prisoner shall be placed at the first on the lowest scale of diet, and proceed gradually to the higher classes of diet"—(Sir *William Miles*).—Question put, That those words be there inserted.—The Committee divided:

Ayes, 2.	Noes, 10.
Sir William Miles.	Mr. Henley.
Sir John Pakington.	Mr. Hardy.
	Mr. Whitbread.
	Mr. Joseph Ewart.
	Mr. Hibbert.
	Mr. Hunt.
	Lord Edward Howard.
	Mr. Beach.
	Mr. Perry Watlington.
	Mr. Walter.

An Amendment made.—Clause, as amended, agreed to.

Clause E., amended, and agreed to.

Clauses 21 to 25, amended, and agreed to.

Clause 26, postponed.

[Adjourned to Monday next, at Twelve o'clock.

Lunæ, 1° *die Maii*, 1865.

MEMBERS PRESENT:

Sir JOHN PAKINGTON took the Chair, in the absence of the Chairman.

Mr. Henley.	Mr. Walter.
Mr. Perry Watlington.	Mr. Whitbread.
Mr. Beach.	Mr. Hanbury.
Mr. Hunt.	Lord Edward Howard.
Mr. Hardy.	

Postponed Clause 26, amended, and agreed to.

Clauses 27 to 31, amended, and agreed to.

Clauses 32 and 33, postponed.

Clause 34, disagreed to.

Clause G., amended, and agreed to.

Clause 35, disagreed to.

Clause H., amended, and agreed to.

Clause 36, amended, and agreed to.

Clauses 37 and 38, disagreed to.

Clause I., amended, and agreed to.

Clauses 39 and 40, amended, and agreed to.

Clause

Clause K., agreed to.

Clauses 41, 42, 43, 44, and 45, disagreed to.

Clause 46, agreed to.

Clause L.—Amendment proposed, to leave out all the words from the word "Act" in line 2, to the word "any" in line 8—(Mr. *Henley*).—Question put, That those words stand part of the Clause.—The Committee divided:

Ayes, 5.	Noe, 1.
Mr. Hardy.	Mr. Henley.
Mr. Whitbread.	
Mr. Beach.	
Mr. Walter.	
Mr. Hunt.	

Clause agreed to.

Clauses 47 and 47a, amended, and agreed to.

Clauses 48 to 51, amended, and agreed to.

Clause M., disagreed to.

Clause N., postponed.

Clauses 52 to 55, amended, and agreed to.

Clause 56, agreed to

Clause 57, disagreed to.

Clauses 58 to 64, postponed.

Clauses 65 and 66, amended, and agreed to.

Clause O., agreed to.

[Adjourned to Thursday next, at Twelve o'clock.

Jovis, 4° die Maii, 1865.

MEMBERS PRESENT:

Sir GEORGE GREY in the Chair.

Mr. Henley.	Sir John Pakington.
Mr. Joseph Ewart.	Mr. Whitbread.
Sir William Miles.	Lord Edward Howard.
Mr. Hibbert.	Mr. Hunt.
Mr. Walter.	Mr. Hanbury.
Mr. Beach.	Mr. Adderley.

Postponed Clauses 32 and 33, amended, and agreed to.

Postponed Clause N., amended, and agreed to.

Postponed Clause 58, read.

Amendment proposed, in page 26, line 19, to leave out all the words from the word "gaoler" to the end of the Clause, in order to insert the words contained in s. 4 of 5 & 6 Will. 4, c. 38, with respect to the responsibility of the sheriff—(Mr. *Henley*)—instead thereof.—Question put, That the words proposed to be left out stand part of the Clause.—The Committee divided:

Ayes, 5.	Noes, 2.
Mr. Joseph Ewart.	Mr. Henley.
Mr. Hibbert.	Mr. Beach.
Sir William Miles.	
Mr. Walter.	
Sir John Pakington.	

Clause amended, and agreed to.

Postponed Clause 59, amended.

Question put, That the Clause, as amended, stand part of the Bill.—The Committee divided:

Ayes, 4.	Noes, 4.
Mr. Henley.	Mr. Whitbread.
Sir William Miles.	Mr. Joseph Ewart.
Mr. Walter.	Mr. Hibbert.
Sir John Pakington.	Mr. Beach.

Whereupon the Chairman declared himself with the Ayes.

Postponed Clauses 60 to 64, amended, and agreed to.

Clauses 67 and 68, amended, and agreed to.

Clause 69, agreed to.

Clause 70, disagreed to.

Clauses 71 and 72, amended, and agreed to.

Clauses P., Q., R., S., and T., disagreed to.

Clauses 73 to 76, amended, and agreed to.

Clauses 77 and 78, disagreed to.

Clauses 79 and 80, agreed to.

Clause 81, amended, and agreed to.

Clause 82, agreed to.

Clause U., agreed to.

Clause V., amended, and agreed to.

Clause (Where the number of prisoners of any church or religious persuasion differing from the Established Church, confined at the same time in prison, on a monthly average taken for the year immediately preceding the passing of this Act or in any succeeding year, amount to twenty-five, the justices, in sessions assembled, shall appoint a minister of that church or persuasion to attend at the prison on the prisoners of his own church or persuasion, and shall fix proper times for the performance by him of Divine worship for all such prisoners; and shall award to him a reasonable sum as a recompense for his services; such sum to be deemed a part of the expense of the prison for which he is so appointed, and to be paid out of the fund legally applicable to the payment of such expenses)—(Lord *Edward Howard*)—brought up, and read 1°.—Question proposed, That the Clause be read a second time.—Question, by leave, withdrawn.

Clause (In every prison in which there are prisoners of any church or religious persuasion differing from that of the Established Church, if no minister of that church or persuasion has been appointed in pursuance of the power hereinbefore given, the justices in sessions assembled shall admit a minister of such church or religious persuasion, who shall have free access to all the prisoners of his own church or religious persuasion at any reasonable time, and shall, if they think fit, make arrangements for the performance of Divine worship by him)—(Lord *Edward Howard*)—brought up, and read 1°.—Question proposed, That the Clause be read a second time.—Question, by leave, withdrawn.

Clause (In the case of a minister of any religious persuasion, appointed or permitted under this Act, who may be disqualified by illness or other insuperable cause from fulfilling his duties in any prison, it shall be lawful for the visiting justices of such prison to nominate temporarily a substitute, such appointment to be confirmed, where needful, by the justices in sessions assembled)—(Lord *Edward Howard*)—brought up, and read 1°.—Question proposed, That the Clause be read a second time.—Question, by leave, withdrawn.

Clause (Prohibition of sentence of solitary confinement)—(Sir *George Grey*)—brought up, read 1°, 2°, amended, and added.

Schedule I., Regulations for government of prisons:—

Regulation 1, agreed to.

Regulations 2, 3, 4, and 5, amended, and agreed to.

Regulation 5 A (Not more than eight hours shall be allowed for sleep, and artificial light, when required, shall be provided for prisoners during the hours not allowed for sleep)—read, and amended.

Question

Question put, That the Regulation, as amended, stand part of the Schedule.—The Committee divided:

Ayes, 4.	Noes, 6.
Mr. Whitbread.	Mr. Henley.
Lord Edward Howard.	Mr. Joseph Ewart.
Sir William Miles.	Mr. Hibbert.
Sir John Pakington.	Mr. Beach.
	Mr. Hunt.
	Mr. Walter.

Regulation 6, disagreed to.

Regulations 7 and 8, agreed to.

Regulations 9, 10, and 11, amended, and agreed to.

Regulation 12, disagreed to.

Regulation 13, amended, and agreed to.

Regulation 14, disagreed to.

Regulation 15, agreed to.

Regulations 16 and 17, amended, and agreed to.

Regulation 18, agreed to.

Regulations 19, 20, 21, and 22, amended, and agreed to.

Regulations 23 and 24, agreed to.

Regulations 25 and 26, amended, and agreed to.

Regulation 27, agreed to.

Regulations 28 to 36, amended, and agreed to.

Regulation 37, disagreed to.

Regulation 38 read.—Amendment proposed, in line 2, to leave out from the word "during" to the word "be," in line 4, in order to insert the words "the first six months of his sentence"—(Sir *J. Pakington*)—instead thereof.—Question put, That the words proposed to be left out stand part of the Regulation.—The Committee divided:

Ayes, 5.	Noes, 5.
Mr. Henley.	Mr. Adderley.
Mr. Hibbert.	Mr. Beach.
Mr. Joseph Ewart.	Mr. Hunt.
Lord Edward Howard.	Sir William Miles.
Mr. Walter.	Sir John Pakington.

Whereupon the Chairman declared himself with the Noes.

Question proposed, to insert the words "the first six months of his sentence."—Amendment proposed to the said proposed Amendment, to leave out the word "six," and insert the word "three"—(Mr. *Hibbert*)—instead thereof.—Question put, That the word "six" stand part of the proposed Amendment.—The Committee divided:

Ayes, 5.	Noes, 7.
Mr. Adderley.	Mr. Henley.
Mr. Beach.	Mr. Hanbury.
Mr. Hunt.	Mr. Whitbread.
Sir William Miles.	Mr. Joseph Ewart.
Sir John Pakington.	Mr. Hibbert.
	Lord Edward Howard.
	Mr. Walter.

Question put, That the word "three" be inserted in the said proposed Amendment.—The Committee divided:

Ayes, 11.	Noe, 1.
Mr. Hanbury.	Mr. Henley.
Mr. Whitbread.	
Mr. Joseph Ewart.	
Mr. Hibbert.	
Lord Edward Howard.	
Mr. Adderley.	
Mr. Beach.	
Mr. Hunt.	
Sir William Miles.	
Mr. Walter.	
Sir John Pakington.	

Words inserted.—Regulation, as amended, agreed to.

Regulation 39, amended, and agreed to.

Regulations 40, 42, and 43, agreed to.

[Adjourned to Monday next, at Twelve o'clock.

Lunæ, 8° *die Maii*, 1865.

MEMBERS PRESENT:

Sir GEORGE GREY, in the Chair.

Mr. Henley.	Lord Edward Howard.
Mr. Hardy.	Mr. Walter.
Mr. Joseph Ewart.	Sir John Pakington.
Mr. Hibbert.	Mr. Whitbread.
Mr. Beach.	Mr. Hanbury.

Regulation 42 a, agreed to.

Regulation 43 a, amended, and agreed to.

Regulation 44, agreed to.

Regulation 45, disagreed to.

Regulations 46 to 48, amended, and agreed to.

Regulation 49, amended, and agreed to.

Regulations 50 to 52, amended, and agreed to.

Regulations 52 a and 52 b, agreed to.

Regulation 53, amended, and agreed to.

Regulation 54.—An Amendment made.—Amendment proposed in page 46, line 43, to omit all the words from the word "communicate" to the word "such"—(Mr. *Hunt*).—Question put, That the words proposed to be left out stand part of the Regulation.—The Committee divided:

Ayes 6.	Noes, 2.
Mr. Henley.	Mr. Hibbert.
Mr. Hardy.	Mr. Hunt.
Mr. Joseph Ewart.	
Lord Edward Howard.	
Mr. Beach.	
Sir John Pakington.	

Regulation, as amended, agreed to.

Regulations 55 and 56, agreed to.

Regulations 57 to 69, amended, and agreed to.

Regulation 70, disagreed to.

Regulation 71, amended, and agreed to.

Regulation 72, agreed to.

Regulation 73, amended, and agreed to.

Regulation 74, disagreed to.

Regulation 75, agreed to.

Regulations 76 to 80, amended, and agreed to.

Regulation 81, agreed to.

Regulation 82, amended, and agreed to.

Regulation 83, ageeed to.

Regulation 84, amended, and agreed to.

Regulation 85, disagreed to.

Regulations

Regulations 86 to 88, amended, and agreed to.

Regulations 89 to 95, disagreed to.

Regulations 96 and 97, amended, and agreed to.

Regulation 98, agreed to.

Regulations 99 to 104, amended, and agreed to.

Regulations 105 and 106, agreed to.

Regulations 107 to 110, amended, and agreed to.

Regulations 111 and 112, agreed to.

Regulation 113, amended, and agreed to.

Regulations 114 and 115, disagreed to.

[Adjourned to Thursday next, at Two o'clock.

Jovis, 11° *die Maii*, 1865.

MEMBERS PRESENT:

Sir GEORGE GREY, in the Chair.

Mr. Walter.	Mr. Joseph Ewart.
Sir William Miles.	Mr. Hankey.
Mr. Hardy.	Mr. Henley.
Sir John Pakington.	Mr. Whitbread.
Mr. Hibbert.	

New Regulation (Room for use as chapel)—(Mr. *Whitbread*)—brought up, read 1°, 2°, and added.

Schedule II., read.

Motion made, and Question proposed, That the word "Abingdon" be inserted in the second line of the Schedule—(Mr. *Walter*).—Amendment proposed, to leave out from the word "That" to the end of the Question, in order to add the words, "though the question of the abolition of Abingdon Gaol is well entitled to consideration, under the peculiar circumstances of the case, the proper mode of proceeding to obtain that object would be by a Private Bill"—(Sir *J. Pakington*)—instead thereof.—Question, That the words proposed to be left out stand part of the Question—put, and negatived.—Question, as amended, agreed to.

Schedule, agreed to.

Schedule III., agreed to.

Preamble, agreed to.

Ordered, To Report.

MINUTES OF PROCEEDINGS

OF THE

SELECT COMMITTEE

ON THE

PRISONS BILL.

Ordered, by The House of Commons, to be Printed,
11 *May* 1803.

MINUTES OF PROCEEDINGS

OF THE

SELECT COMMITTEE

ON THE

SALMON FISHERY ACT (1861) AMENDMENT BILL.

Ordered, by The House of Commons, *to be Printed*,
13 *June* 1865.

Lunæ, 15° *die Maii*, 1865.

Salmon Fisheries Act (1861) Amendment Bill, read 2°, and committed to a Select Committee.

Veneris, 19° *die Maii*, 1865.

Ordered, That the Petition of the Nobility and others of Wrexham and other places against the Bill be referred to the Committee.

Ordered, That the Committee do consist of Seventeen Members.

Committee nominated of—

Mr. Baring.
Mr. Acland.
Mr. Cavendish Bentinck.
Mr. Henry Fenwick.
Mr. Edward Fenwick.
Mr. Fleming.
Mr. Hibbert.
Mr. Knight.
Mr. Lawson.
Mr. Lygon.
Lord Robert Montagu.
Mr. Morritt.
Colonel Pennant.
Mr. Whalley.
Mr. Percy Wyndham.
Mr. M'Mahon.
Mr. Mackie.

Ordered, That Five be the quorum of the Committee.

Jovis, 25° *die Maii*, 1865.

Ordered, That the Petitions for Alteration, from Gentlemen and others interested in the prosperity of the River Tweed, and from Tewkesbury, be referred to the Committee.

Veneris, 26° *die Maii*, 1865.

Ordered, That the Petition of the Proprietors and Occupiers of Fisheries in the Upper Waters of the Dee and its Tributaries, for Alteration, be referred to the Committee.

Ordered, That the Petition of Edward Lawrence Tickle, of Llwngroes Hall, in the county of Salop, for Compensation, be referred to the Committee.

PROCEEDINGS OF THE COMMITTEE.

Veneris, 26° *die Maii*, 1865.

MEMBERS PRESENT:

Mr. T. G. Baring.	Lord R. Montagu.
Col. Pennant.	Mr. Acland.
Mr. Lygon.	Mr. Fleming.
Mr. H. Fenwick.	Mr. Bentinck.
Mr. E. Fenwick.	Mr. M'Mahon.
Mr. Hibbert.	Mr. Lawson.
Mr. Morritt.	Mr. Whalley.
Mr. Knight.	Mr. Mackie.
Mr. Percy Wyndham.	

Mr. BARING was called to the Chair.

The Committee proceeded to consider the Bill.

The Preamble was postponed.

The Committee went through the Bill, Clause by Clause.

Clauses 1, 2, and 3, postponed.

Clause 4:—Amendment proposed in line 29, to leave out the word "may," and to insert the word "shall" instead thereof—(Lord *R. Montagu*).—Question, That the word "may" stand part of the Clause, put, and agreed to.

Another amendment proposed in line 30, to leave out from the word "such" to "thereof" in line 31 inclusive, in order to insert the following words,—"into a Fishery District, the River, and all the Streams, Lakes, and Tributaries which flow into it, or which have a common estuary," instead thereof—(Lord *R. Montagu*).—Question, That the words proposed to be left out stand part of the Clause, put, and agreed to.—Clause 4 agreed to.

Clause 5, line 38.—Amendment proposed, to leave out the word "one," and to insert the word "three" instead thereof—(Mr. *Lygon*).—Question put, That the word "one" stand part of the Clause.—Committee divided:

Ayes, 9.	Noes, 2.
Mr. E. Fenwick.	Mr. Lygon.
Mr. Hibbert.	Mr. Bentinck.
Mr. Wyndham.	
Mr. Morritt.	
Lord R. Montagu.	
Mr. Acland.	
Mr. Fenwick.	
Mr. Fleming.	
Mr. Whalley.	

Clause 5 amended, and agreed to.

Clause 6.—Amendment proposed, to omit the words from "justices," in line 2, to the word "assembled" inclusive, in the same line—(Mr. *Bentinck*).—Question put, That the words proposed to be left out stand part of the Clause.—The Committee divided:

Ayes, 10.	Noes, 2.
Mr. Lygon.	Mr. Bentinck.
Mr. Hibbert.	Mr. E. Fenwick.
Mr. Wyndham.	
Mr. Morritt.	
Lord R. Montagu.	
Mr. Acland.	
Mr. Knight.	
Mr. Fenwick.	
Mr. Fleming.	
Mr. Lawson.	

Clause 6 agreed to.

Clauses 7, 8, and 9, agreed to.

Clause 10 amended, and agreed to.

Clause 11 agreed to.

Clauses 12, 13, 14, 15, and 16, amended, and agreed to.

Clauses 17, 18, 19, and 20, agreed to.

Clause 21 amended.—Amendment proposed, to leave out Section 4 of the said Clause—(Mr. *Bentinck*).—Question, That Section 4 stand part of the Clause, put, and agreed to.

Clauses 22 and 23 negatived.

Clause 24.—Amendment proposed at the end of the Clause, to add the following words:—"Where the funds arising from licenses are insufficient to meet the wants and requirements of the Board of Conservators, they may, if they deem it advisable to raise more funds for the purposes of this Act, thereafter levy a frontage rate upon the owners of land along the whole course of the river"—(Lord *R. Montagu*).—Question, That those words be there added, put, and negatived.

Clause 25 agreed to.

Clause 26 amended, and agreed to.

Clause 27.—Amendment proposed in line 28, after the word "water-bailiff," to insert "with a written authority from a Conservator."—Question, That those words be there inserted, put, and negatived.—Clause 27 amended, and agreed to.

Clause 28.—An amendment made: another amendment proposed, after the word "nets," in line 2, to insert the following words: "except those used by persons fishing for a livelihood in the public waters of rivers"—(Mr. *Fleming*).—Question, That those words be there inserted, put, and negatived.

Clause 29.—An amendment proposed, in line 12, after "district," to insert the following words: "Provided always, that the Board of Conservators shall be entitled to vary the price of the license, as they may think fit, for the period of a year, and may grant such licenses for any less period than a year; and further provided, that any person who may follow the occupation of fishing for a livelihood, and by reason of any claim to a prescriptive right of fishing in any river, or by reason of having exercised such right of fishing, under such circumstances as would, in the opinion of the Board, render it illegal or unjust to subject them to any charge in respect thereof, that in any such cases the said Board of Conservators may grant a license to fish, upon such terms and conditions as they may deem shall be just and reasonable"—(Mr. *Whalley*).—Question, That those words be there inserted, put, and negatived.

Another amendment proposed in line 12, after the word "district," to insert the following words: "The Conservators may also grant licenses for the use of a rod and line for any part of the open season not exceeding two months, at a price not exceeding 5*s.*"—(Mr. *E. Fenwick*).—Question put, That those words be there inserted.—The Committee divided:

Ayes, 5.	Noes, 7.
Mr. E. Fenwick.	Mr. Bentinck.
Mr. Hibbert.	Mr. Wyndham.
Mr. Lawson.	Mr. Morritt.
Mr. Whalley.	Lord R. Montagu.
Mr. M'Mahon.	Mr. Knight.
	Mr. Acland.
	Mr. H. Fenwick.

Clause 29 amended, and agreed to.

Clauses 30 and 31, agreed to.

Clause 32 amended, and agreed to.

Clause 33 agreed to.

Clauses 34, 35, 36, and 37, postponed.

Clause 38 negatived.

Clause 39 amended, and agreed to.

Clauses 40, 41, and 42, agreed to.

Clause 43 postponed.

Clause 44 agreed to.

Clause 45 amended, and agreed to.

Clause 46 negatived.

Clause 47 agreed to.

Clause 48 postponed.

Clauses 49, 50, 51, 52, and 53, agreed to.

Clause 54 postponed.

Clause 55 amended.—Question put, That the Clause, as amended, stand part of the Bill.—Committee divided:

Ayes, 6.	Noes, 2.
Mr. E. Fenwick.	Lord R. Montagu.
Mr. Hibbert.	Mr. Knight.
Mr. Wyndham.	
Mr. Acland.	
Mr. H. Fenwick.	
Mr. M'Mahon.	

[Adjourned till Monday next, at Twelve o'clock.

Lunæ, 29° die Maii, 1865.

MEMBERS PRESENT:

Mr. Lygon.	Mr. Acland.
Mr. E. Fenwick.	Mr. H. Fenwick.
Mr. Hibbert.	Mr. M'Mahon.
Mr. P. Wyndham.	Mr. Mackie.
Mr. Morritt.	Mr. Bentinck.
Mr. Knight.	Mr. Lawson.

Mr. BARING in the Chair.

The Committee proceeded with the postponed Clauses of the Bill.

Clause 34.—Amendment proposed, to omit the words from "either," in line 36, to "way," in line 37, inclusive—(Mr. *E. Fenwick*).—Question put, That the words proposed to be left out stand part of the Clause, put, and agreed to.—Clause amended, and agreed to.

Clause 35 amended, and agreed to.

Clause 36 agreed to.

Clauses 37, 43, 48, and 54, amended, and agreed to.

New Clause (A.) brought up, and read 1°, as follows:—"Whereas, by the twelfth section of the Salmon Fisheries Act, 1861, it is provided that no fishing milldam, although lawfully in use as therein mentioned, shall be used for the purpose of catching salmon, unless it have attached thereto a fish-pass of such form and dimensions as shall be approved of by the Home Office, nor unless such fish-pass has constantly running through it such a flow of water as will enable salmon to pass up and down such pass: And whereas, by the twentieth and twenty-second sections of the said Act, the proprietor or occupier of any fishery is required, during the annual and weekly close-time, to remove obstructions to the free passage of fish in or through the cruives, cribs, or boxes within his fishery: be it enacted, that no fishing milldam having a fish-pass attached thereto in conformity with the said twelfth section shall, in cases where the Board of Conservators of the district certify that in their opinion sufficient passages for fish have been otherwise provided, be deemed illegal by reason only that a compliance with the requirements of the said twentieth and twenty-second sections as to the removal of obstructions so lowers the water in which the dam is situate, that during the said weekly and annual close-times such a flow of water as is required by the said twelfth section is not maintained in

the said fish-pass"—(Mr. *Acland*).—Question put, That this clause be read 2°.—The Committee divided:

Ayes, 3.	Noes, 9.
Mr. Bentinck.	Mr. Lygon.
Mr. Acland.	Mr. E. Fenwick.
Mr. Fleming.	Mr. Hibbert.
	Mr. P. Wyndham.
	Mr. Morritt.
	Mr. Knight.
	Mr. H. Fenwick.
	Mr. M'Mahon.
	Mr. Mackie.

New Clauses (B.) and (C.), read 1°, 2°, and added to the Bill.

New Clauses (D.), (E.), and (F.), read 1°, 2°, amended, and added to the Bill.

New Clause (G.) brought up, and read 1° and 2°: "The said Secretary of State may, on the representation of the Board of Conservators of a district, and on proof made to his satisfaction that the observance of a weekly close-time is specially injurious or inconvenient to any particular class of fishermen, make a bye-law dispensing in such district with the observance of the whole or any part of such weekly close-time by that class of fishermen on condition of their keeping an annual close-time for such longer period, and during such open months as may be appointed by the said Secretary of State. He may also, on a like representation, that the provisions of the Salmon Fishery Act, 1861, with respect to the meshes of nets may be made less stringent in any particular weir without detriment to the salmon fishing in that weir, make a bye-law allowing a mesh of smaller size. The said Secretary may in like manner vary or repeal any bye-law made by him in pursuance of this section, but any such bye-law when in force shall be of the same validity as if contained in the body of this Act"—(*Chairman*).—Amendment proposed, after the word "size," to insert the words, "and upon a like representation to permit the use of spears in certain districts"—(Mr. *Lawson*).—Question, That those words be there inserted, put, and negatived.—Question, That this Clause be added to the Bill, put, and negatived.

New Clauses (H.), (I.), (J.), (K.), (L.), (M.), (N.), and (O.), read 1° and 2°, and added to the Bill.

New Clause (P.) brought up, and read 1° and 2°: "No person shall use the implement called the 'otter,' 'lath,' or 'jack' for the capture of salmon: any person acting in contravention of this section shall, for each offence, incur a penalty of 2 *l*, and shall also forfeit the said implement, and any fish so caught by him"—(Mr. *Lawson*).—Amendment proposed in line 2, to omit the words "or trout"—(Mr. *Hibbert*).—Question, That the words "or trout" stand part of the proposed Clause.—The Committee divided:

Ayes, 8.	Noes, 5.
Mr. Bentinck.	Mr. Lygon.
Mr. Wyndham.	Mr. E. Fenwick.
Mr. Morritt.	Mr. Hibbert.
Mr. M'Mahon.	Mr. Knight.
Mr. Mackie.	Mr. H. Fenwick.
Mr. Fleming.	
Lord R. Montagu.	
Mr. Lawson.	

Question, That this Clause be added to the Bill.—The Committee divided:

Ayes, 6.	Noes, 7.
Mr. Bentinck.	Mr. E. Fenwick.
Mr. Lygon.	Mr. Hibbert.
Mr. P. Wyndham.	Mr. Morritt.
Mr. Mackie.	Mr. Knight.
Mr. Fleming.	Mr. H. Fenwick.
Mr. Lawson.	Mr. M'Mahon.
	Lord R. Montagu.

New Clause (Q.): "Any person using a 'cross line' for the capture of salmon or trout shall, for each offence, incur a penalty of Two Pounds, and shall also forfeit any fish so caught by him"—(Mr. *Lawson*).—Question, That this Clause be read 1°, put, and negatived.

New Clause (R.) brought up, and read 1 , 2°, and added to the Bill.

New Clause (S.)—(Mr. *P. Wyndham*)—brought up, and read 1°, 2°, and added to the Bill.

New Clause (T.) brought up, and read 1 , as follows:—"All justices of the peace acting for and within the limits of any fishery district, and being either owners or occupiers of any

any lands abutting upon any salmon river within the same, shall be *ex officio* members of the Board of Conservators for such district"—(Mr. *E. Fenwick*).—Question, That the said Clause be now read a second time.—The Committee divided:

Ayes, 7.	Noes, 5.
Mr. Bentinck.	Mr. Lygon.
Mr. E. Fenwick.	Mr. H. Fenwick.
Mr. Hibbert.	Mr. M'Mahon.
Mr. P. Wyndham.	Lord R. Montagu.
Mr. Morritt.	Mr. Lawson.
Mr. Knight.	
Mr. Acland.	

Schedule considered:—Amendment proposed in line 15, to insert the words "otter, lath, or jack, 3 *l.*"—(Mr. *H. Fenwick*).—Question, That those words be there inserted, put, and agreed to.

Another amendment proposed, after the word "3 *l.*," to insert the words "cross lines, 2 *l.*"—(Mr. *H. Fenwick*).—Question, That those words be there inserted.—The Committee divided:

Ayes, 5.	Noes, 4.
Mr. Morritt.	Mr. Lygon.
Mr. Acland.	Mr. E. Fenwick.
Mr. H. Fenwick.	Mr. P. Wyndham.
Mr. M'Mahon.	Mr. Knight.
Mr. Lawson.	

Second Schedule amended, and agreed to.

Clauses 1, 2, and 3, amended, and agreed to.

Preamble agreed to.

Ordered to report.

MINUTES OF PROCEEDINGS

OF THE

SELECT COMMITTEE

ON THE

SALMON FISHERY ACT (1861) AMENDMENT BILL.

Ordered, by The House of Commons, *to be Printed*,
13 *June* 1865.

358.

Under 1 *oz.*

SPECIAL

REPORT

FROM THE

SELECT COMMITTEE

ON

WATERWORKS BILL;

TOGETHER WITH THE

PROCEEDINGS OF THE COMMITTEE,

MINUTES OF EVIDENCE,

APPENDIX, AND INDEX.

Ordered, by The House of Commons, *to be Printed,*
23 *June* 1865.

Lunæ, 1° *die Maii*, 1865.

Waterworks Bill, read 2°, and committed to a Select Committee.

Jovis, 11° *die Maii*, 1865.

Committee nominated of,—

Mr. Beecroft.
Mr. Caird.
Mr. Ferrand.
Mr. William Edward Forster.
Mr. Milner Gibson.
Sir Edward Grogan.
Lord Richard Grosvenor.
Mr. Hibbert.
Mr. Kendall.
Sir John Ogilvy.
Mr. Roebuck.
Mr. Scholefield.
Mr. Smollett.
Mr. John Tollemache.

Ordered, That the Committee have Power to send for Persons, Papers and Records.

Ordered, That Five be the Quorum of the Committee.

Veneris, 12° *die Maii*, 1865.

Ordered, That Mr. Dawson Damer be added to the Committee.

Veneris, 23° *die Junii*, 1865.

Ordered, That the Committee have power to make a Special Report, and to report the Minutes of Evidence taken before them, to The House.

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SPECIAL REPORT.

THE SELECT COMMITTEE to whom the WATERWORKS BILL was referred, have agreed to the following SPECIAL REPORT:

FROM the evidence taken by your Committee, it appears that the storing of water for manufacturing and other purposes in large reservoirs is always dangerous, and that sometimes great loss of life and great destruction of property have been occasioned by accidents to such reservoirs; and your Committee therefore deem it the duty of the Legislature to protect the public, as far as circumstances permit, from the possibility of such mischief; and in order to point out what in the opinion of your Committee ought to be the scope and object of legislation in this matter, they have agreed to submit to the House the following propositions:

1. That in all cases in which it is proposed to construct a large reservoir, the undertakers shall submit to the Home Office or the Board of Trade, as may hereafter be determined, plans and sections of the site selected for such reservoir, and of the works to be erected, and also descriptions of the mode of construction.

2. That in all such cases it should be the duty of the Home Office or Board of Trade to send a competent person to such site, in order to verify and report upon such plans, and sections and descriptions.

3. That it should be the duty of the Home Office or the Board of Trade to submit such plans, sections, and descriptions, together with the observations of the person so sent to any Select Committee appointed by either House of Parliament to consider any Bill by which powers are to be given to construct the contemplated works.

4. That it shall be the duty of the Home Office or the Board of Trade to send some competent person to inspect and report upon the works that are being constructed, so that if there be any glaring deviation from the rules laid down either by any Private Act, under which the reservoir inspected may be constructed, or by any general Act respecting waterworks that may be passed, the deviation may be made known to the Home Office or the Board of Trade. And it seems important, in order that competent inspectors should be employed by the Government, that they should receive ample remuneration for their labour and services.

5. That when any reservoir which has been inspected as above is completed, the undertakers shall be bound to give due notice of such completion to the Home Office or the Board of Trade. And that such reservoir shall not be filled with water until after the expiration of a specified time. And that during such time it shall be competent to the Home Office or the Board of Trade to prohibit the undertakers from allowing water to be let into such reservoir. But if, within the specified time, no such prohibition be issued, then it may be competent to the undertakers to fill the reservoir with water.

6. And, further, your Committee having found that large reservoirs have at times been allowed to decay and become dangerous, they would suggest that an adequate supervision over all large reservoirs should be maintained by

by the Home Office or the Board of Trade, and to that end, from time to time competent persons should be sent to inspect and report upon such reservoirs.

7. Your Committee do not intend to diminish in any degree the responsibility of undertakers of waterworks, contemplated by the Bill referred to this Committee, to pay all such damage as may result from the water stored by them. In the opinion of your Committee the provisions by which such responsibility is imposed on such undertakers should be stringent and completely unambiguous.

Your Committee believe that to give effect to their suggestions, by legislation, would require much care, time, and great consideration, which at this advanced period of the Session cannot be afforded to the subject. They, therefore, determined to proceed no further with the consideration of the Bill referred to them. And thereupon your Committee came to the following Resolution :—

"That inasmuch as there appears to be no prospect of any adequate legislation upon the subject submitted to the Committee during the present Session, they have resolved to report to the House the Evidence taken by them during their investigation of the matter, and to accompany that Evidence with a recommendation, that the Government should, early in the next Session of Parliament, bring in a Bill embodying the views submitted to the House by the Committee."

Your Committee have, therefore, in conclusion, to report, that in their opinion it is not expedient to proceed further with the Bill committed to them.

23 *June* 1865.

PROCEEDINGS OF THE COMMITTEE.

Martis, 16° *die Maii*, 1865.

MEMBERS PRESENT:

Mr. Dawson Damer.
Mr. Roebuck.
Mr. Tollemache.
Mr. Ferrand.
Mr. Hibbert.
Mr. Kendall.
Sir John Ogilvy.
Mr. Smollett.
Mr. Milner Gibson.

Mr. ROEBUCK is called to the Chair.

The Committee deliberated.

[Adjourned till Friday, at Twelve o'clock.

Veneris, 19° *die Maii*, 1865.

MEMBERS PRESENT:

Mr. ROEBUCK in the Chair.

Mr. Dawson Damer.
Mr. Smollett.
Mr. Milner Gibson.
Mr. Tollemache.
Mr. Ferrand.
Lord Richard Grosvenor.
Mr. Hibbert.
Mr. Kendall.
Sir John Ogilvy.
Mr. Beecroft.
Mr. W. E. Forster.

Mr. *Thomas Hawkesley*, C. E., examined.

[Adjourned till Tuesday, at Twelve o'clock.

Martis, 23° *die Maii*, 1865.

MEMBERS PRESENT:

Mr. ROEBUCK in the Chair.

Mr. Beecroft.
Mr. W. E. Forster.
Mr. Ferrand.
Lord Richard Grosvenor.
Sir John Ogilvy.
Mr. John Tollemache.
Mr. Smollett.
Mr. Hibbert.
Mr. Kendall.

Sir *Arthur Cotton* and Mr. *John Fowler*, C. E., were severally examined.

[Adjourned till Friday, at Twelve o'clock.

Veneris, 26° *die Maii*, 1865.

MEMBERS PRESENT:

Mr. ROEBUCK in the Chair.

Mr. Milner Gibson.	Mr. Tollemache.
Mr. Ferrand.	Lord Richard Grosvenor.
Mr. Dawson Damer.	Mr. Hibbert.
Mr. W. E. Forster.	Mr. Kendall.
Sir John Ogilvy.	Mr. Smollett.

Mr. *J. Maclean*, C. E., and Mr. *Robert Rawlinson*, C. E., were severally examined.

Mr. *John Murray*, C. E., examined.

[Adjourned till Friday next, at Twelve o'clock.

Veneris, 2° *die Junii*, 1865.

MEMBERS PRESENT:

Mr. ROEBUCK in the Chair.

Mr. Milner Gibson.	Mr. Hibbert.
Mr. Tollemache.	Sir John Ogilvy.
Mr. W. E. Forster.	Mr. Beecroft.

Mr. *Robert Rawlinson*, C. E., further examined.

Mr. *Matthew Bullock Jackson*, C. E. examined.

Adjourned till Friday, 16th inst., at Twelve o'clock.

Veneris, 16° *die Junii*, 1865.

MEMBERS PRESENT:

Mr. ROEBUCK in the Chair.

Mr. W. E. Forster.	Mr. Kendall.
Mr. Tollemache.	Mr. Hibbert.
Sir John Ogilvy.	Lord Richard Grosvenor.

Mr. *James Leslie*, C. E., and Mr. *John Frederick Bateman*, C. E., were severally examined.

[Adjourned till Tuesday next, at Twelve o'clock.

Martis, 20° *die Junii*, 1865.

MEMBERS PRESENT:

Mr. ROEBUCK in the Chair.

Mr. W. E. Forster.	Mr. Hibbert.
Mr. Milner Gibson.	Lord Richard Grosvenor.
Mr. Kendall.	Mr. Beecroft.
Sir John Ogilvy.	

The Committee deliberated.

Mr. *Milner Gibson*, President of Board of Trade, a Member of the Committee, examined.

[Adjourned till Friday next, at One o'clock, to consider a Report to be proposed by the Chairman.

Veneris, 23° *die Junii*, 1865.

MEMBERS PRESENT:

Mr. ROEBUCK in the Chair.

Mr. W. E. Forster.	Mr. Milner Gibson.
Mr. Tollemache.	Mr. Kendall.
Sir John Ogilvy.	Lord Richard Grosvenor.

The Committee deliberated.

Resolved, "That inasmuch as there appears to be no prospect of any adequate legislation upon the subject submitted to the Committee during the present Session, they have resolved to report to the House the Evidence taken by them during their investigation of the matter, and to accompany that Evidence with a recommendation that the Government should, early in the next Session of Parliament, bring in a Bill embodying the views submitted to the House by the Committee."

Resolved, "That the Chairman be instructed to move the House for leave to make a Special Report."

Special Report proposed by the *Chairman*, read, as follows:—

"From the Evidence taken by Your Committee, it appears that the storing of water for manufacturing and other purposes in large reservoirs is always dangerous, and that sometimes great loss of life and great destruction of property have been occasioned by accidents to such reservoirs; and Your Committee therefore deem it the duty of the Legislature to protect the public, as far as circumstances permit, from the possibility of such mischief; and in order to point out what, in the opinion of Your Committee, ought to be the scope and object of legislation in this matter, they have agreed to submit to the House the following propositions:—

1. That in all cases in which it is proposed to construct a large reservoir, the undertakers shall submit to the Board of Trade plans and sections of the site selected for such reservoir, and of the works to be erected, and also descriptions of the mode of construction.

2. That in all such cases it should be the duty of the Board of Trade to send a competent person to such site, in order to verify and report upon such plans and sections and descriptions.

3. That it should be the duty of the Board of Trade to submit such plans, sections and descriptions, together with the observations of the person so deputed by the Board, to the Select Committee appointed by this House to consider the Bill by which powers are to be given to construct the contemplated works.

4. That it shall be the duty of the Board of Trade to depute some competent person to inspect and report upon the works that are being constructed, under the powers granted by such Private Bill; so that if there be any glaring deviation from the rules laid down by such Bill, the deviation may be made known to the Board of Trade. And it seems important, in order that competent inspectors should be employed by

the Government, that they should receive ample remuneration for their labour and services.

5. That when the reservoirs to be constructed under the powers of such Private Bill or Act is completed, the undertakers shall be bound to give due notice of such completion to the Board of Trade. And that such reservoir shall not be filled with water until after the expiration of a specified time. And that during such time it shall be competent to the Board of Trade, if it should seem fit, to prohibit the undertakers from allowing water to be let into such reservoir. But if, within the specified time, no such prohibition is issued, then it may be competent to the undertakers to fill the reservoir with water.

6. And, further, Your Committee having found that such reservoirs have at times been allowed to decay and become dangerous, they would suggest that a constant and adequate supervision over all considerable reservoirs should be maintained by the Board of Trade, and to that end from time to time competent persons should be deputed to inspect and report upon such reservoirs.

7. Your Committee do not intend to diminish in any degree the responsibility of Water Companies, contemplated by the proposed Bill, to pay all such damage as may result from the water stored by them. In the opinion of your Committee the provisions, by which such responsibility is imposed on such Water Companies, should be stringent, and completely unambiguous.

"Your Committee believe that to give effect to their suggestions, by legislation, would require much care, time, and great consideration, which at this advanced period of the Session cannot be afforded to the subject. They, therefore, determined to proceed no further with the consideration of the Bill submitted to them. And thereupon your Committee came to the following Resolution:—

"'That inasmuch as there appears to be no prospect of any adequate legislation upon the subject submitted to the Committee during the present Session, they have resolved to report to the House the Evidence taken by them during their investigation of the matter, and to accompany that Evidence with a recommendation, that the Government should, early in the new Parliament, bring in a Bill embodying the views submitted to the House by the Committee.'

"Your Committee have, in conclusion, to report, that in their opinion it is not expedient to proceed further with the Bill committed to them."

Report read 2°, paragraph by paragraph, and agreed to, with Amendments.

Resolved, "That this be the Special Report to the House."

Resolved, "That the Minutes of Evidence taken before the Committee be reported to the House."

Ordered, To Report.

EXPENSES OF WITNESSES.

NAME of WITNESS.	Profession or Condition.	From whence Summoned.	Number of Days absent from Home, under Orders of Committee.	Expenses of Journey to London and back.	Allowance during Absence from Home.	Total Expenses allowed to Witness.
				£. s. d.	£. s. d.	£. s. d.
Mr. Matthew Bullock Jackson.	Civil Engineer	Sheffield - -	2	3 - -	6 6 -	9 6 -
Mr. James Leslie - -	Civil Engineer	Edinburgh -	2	7 10 -	6 6 -	13 16 -
Mr. John Yeomans - -	Town Clerk -	Sheffield - -	6	17 8 -	12 12 -	30 - -
					Total - - - £.	53 2 -

MINUTES OF EVIDENCE.

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MINUTES OF EVIDENCE.

Veneris, 19° *die Maii*, 1865.

MEMBERS PRESENT:

Mr. Beecroft.
Mr. Ferrand.
Mr. William Edward Forster.
Mr. Milner Gibson.
Lord Richard Grosvenor.
Mr. Hibbert.
Mr. Kendall.
Sir John Ogilvy.
Mr. Roebuck.
Mr. Smollett.
Mr. John Tollemache.
Mr. Dawson Damer.

JOHN ARTHUR ROEBUCK, Esq., IN THE CHAIR.

Mr. THOMAS HAWKSLEY, called in; and Examined.

Mr. *T. Hawksley.*
19 May 1865.

1. *Chairman.*] You have had great experience in the construction of works and large reservoirs for the supply of water to towns?—Yes.

2. You are engineer, I think, to the Liverpool Waterworks?—Yes, for the construction of the Rivington Works, from which Liverpool is now supplied.

3. Have you also been engineer to the Sheffield Waterworks since the resignation of Mr. Leather?—I am appointed, and I enter on my duties to-morrow.

4. Have you seen the Bill that has been brought into the House by the Government?—I have.

5. In your opinion, would it afford sufficient protection for the public?—In general I agree with the objects and intentions of the Bill, and with the clauses which have been introduced into it; I think there are some defects, and I think some amendments are required, and I think some additions may become necessary; but, on the whole, I think that it is a good measure, and a well-intentioned measure, and that, provided proper care be taken, it will be beneficial to both parties in the end.

6. Will you point out the defects?—Not having had any intimation of what I was to come here upon, I have not studied the Bill further than this, that I have looked through it this morning, and made a few notes in the margin, and upon those I can of course express an opinion very easily. I understand it to be a Bill to secure the public as far as possible from calamities which might ensue from the bursting of reservoirs. It seems to me that the application of Bills should scarcely be limited to waterworks companies, because a great number of the largest reservoirs in the kingdom are reservoirs of canal companies; and although I do not wish to state, nor do I believe, that any of those reservoirs are in an insecure state, yet this Bill purposes, so far as its intention goes, to regard them as being possibly in an insecure state, and therefore it ought to be extended in my opinion, if it is passed, not only to waterworks, but to canals.

7. Do you think there are any private reservoirs belonging to large manufacturing mills of such an extent as to require any interference by legislation?—There are some, but I do not think they are very numerous. It may possibly be, that even with regard to this Bill there should be some limitation as to magnitude; because it appears to bring in all the little service reservoirs and tanks of water companies which are not really intended to be included within its provisions. I apprehend that what are meant to be included are large storeage and impounding reservoirs.

8. I think you acted with Mr. Simpson, Mr. Bateman, Mr. Fowler, and Mr. Harrison, in a joint report that was made on the subject of the Sheffield Waterworks Company?—I did.

9. And that report was presented to the Chairman and Directors of the Sheffield Waterworks Company, and afterwards sent to the Government?—I do not know what became of it ultimately; we presented our report to the Waterworks Company, and I think I have heard that a copy of it was transmitted to the Government, but I am not quite certain on that point.

10. You gave evidence before a Committee of the House of Lords on the subject of the Waterworks Bill, which was brought in by the Sheffield Company last year?—I did.

11. I think in that evidence you said that you fancied that the calamity arose from pure accident?—Yes.

12. Having gained further experience on that matter, are you still of that opinion?—I am.

13. Will

Mr. *T. Hawksley.*

19 May 1865.

13. Will you explain the mode in which that accident arose; and no doubt it will be very interesting to the Committee, if you will be good enough to state generally the way in which an embankment of that sort is made?—Embankments are made in a great variety of ways, according to the position for which they are intended, and according to the character of the country in which they are placed, and the nature of the soil, and the materials that are used in their construction. With regard to large impounding reservoirs in the central part of England, and in the northern parts, embankments are usually made across natural valleys; they are generally made of the earth and clay of the neighbourhood, and they are usually faced on the inside with stone; and the means of making them water-tight consists of what is called a puddled wall passing along the centre, and which is brought up from the water-tight stratum either found naturally to exist on the surface of the valley, or reached by sinking to a very considerable depth below. In the case of the Sheffield Waterworks, and also the Liverpool Works, and a great many others which have been constructed in that manner, the trencher, before the commencement of the puddled wall, gets down to a great depth; in the case of the Liverpool Works it was found necessary, as regards one of the reservoirs, to carry the puddled trench down to a depth of 95 feet; in many cases they are carried down to 60 or 70 feet; I think in the Sheffield case they were carried 30 feet, and 40 feet, and 50 feet, as the water-tight stratum was found to be placed by nature.

14. Will you state the exact geographical formation of that valley?—The geographical formation is that of the coal measures. It has been reported, and I guess that your mind may have been directed to the subject from that fact, that it consists of millstone grit. There is no millstone grit in the neighbourhood, nor within some miles. The formation is that of the coal measures, and consists of alternate bands of rock and clay and shale.

15. What was the stratum to which they arrived, and which they deemed water-tight?—I believe in some cases shale, and in others clay, but I believe principally shale.

16. Do you think that in all cases along the line of the embankment they arrived at a safe foundation?—I believe the embankment, previously to the accident, to have been perfectly water-tight. There were no complaints made. None of the persons resident in the neighbourhood, and who had seen the embankment every day, suggested that there was any leakage; and it is a fact that there had been water in the reservoir from the previous June or July, the accident occurring in March. The water had been generally more than 50 feet deep, and it had filled up to much more than 50 feet deep previously to the accident. A short time before the accident there had been very heavy falls of rain, which had filled the reservoir to within a few inches of the top; but, at the same time, this occurred—that the adjoining hill, which was composed of slippery moving material, descended somewhat into the valley in consequence of the rains, and the back of the bank having been placed with the outer slope resting on a part of the material which I may suppose to be the hill side, when that slipped the outer portion of the bank was set in motion, and tore it. Of course, when the puddled wall which runs down the centre of the embankment lost its support, there being at that time very nearly 90 feet in depth of water in the embankment, it was only the work of a few hours to complete the destruction of the reservoir.

17. When the embankment was made, could an uninstructed eye judge to your satisfaction about its solidity or not?—No; I am bound to say, that if I had been the engineer, I might in that particular case have been the unhappy cause of that calamity; I might have committed that very mistake.

18. In the origin, was it intended to make the embankment at a different point, where the valley was narrower?—It was intended to make the embankment, at one end, nearly on the present site; but the embankment was slewed round to avoid, as was supposed, the bad ground; it was believed to have been avoided, and no danger was apprehended, either by the engineer or by any person in the neighbourhood.

19. Was the ground which they endeavoured to avoid supposed to be full of springs?—No, I think not; it was not because it was full of springs, but because it evinced, from superficial appearances, that it had at some time or other, and possibly at many times, slipped down upon the harder strata beneath.

20. In order to avoid that danger, they changed, in fact, the line of the embankment?—They did.

21. From your subsequent knowledge of the ground at the place where the embankment was made, do you think that, when it was discovered there was that treacherous site, sufficient precautions were taken to insure the safety of the embankment?—I think so. The very fact of having moved the line of the embankment, shows that the engineer was not only alive to the fact that there had been slips, but that he did his best to avoid them.

22. You think that merely slewing round the embankment was doing his best?—Yes; there was a small valley between this slippery ground and the place where the embankment was ultimately erected. Mr Leather, the engineer, turned the course of the embankment, so as to get from one side of that valley to the other side. When he had changed the embankment from one side of that valley to the other side, he believed (as I might have believed) that he had avoided any dangerous ground, and that the embankment would prove a solid construction.

23. Having chosen the site for the embankment, I suppose all the dangers of that site were hidden the moment they began to cover it with earth?—Yes.

24. So that any danger that might exist, became really hidden from the sight of anybody inspecting the embankment?—Certainly. Any subsequent danger could only be developed by the fact of the existence of leakage.

25. It follows, I think, that every care and every precaution should have been taken in the choosing of the site, and that as much evidence as possible should have been obtained before commencing the work?—Supposing the accident had been due to a defect of the site upon which the embankment was constructed, that would be so; but, in point of fact, the cause of the accident was external to the embankment itself.

26. I am not speaking of the particular case, in that sense; but I wish to ask you whether in every

every case of every embankment, the moment you have built up a certain number of feet, all the errors which have been committed in the choice of the site are obliterated?—Certainly. First of all, it is necessary to make a deep puddled trench, according to the nature of the ground; but it is necessary that that puddled trench should go down to some water-tight stratum. After the puddle is put into the trench no person can see whether the bottom of the trench is water-tight or not; it is closed up. Again, with regard to the construction of the embankment (which is quite a different part of the operation), it is necessary to see that the ground upon which the embankment is placed is sufficiently stable to sustain the weight of the embankment. That must be matter of judgment. Sometimes an engineer is deceived; ground which may to the eye, or indeed on exploring, appear to be stable, does not, from some cause or other, afterwards result in being stable; the embankment presses back on the ground; there is a deep part of the embankment which brings, it may be, many tons weight on a square foot; there is another part of the embankment which brings only the weight of a few hundred weight on the earth; and if the foundation is capable of being squeezed by a severe pressure in the centre, it will puff up where the pressure is lighter, and you may have a very awkward slip, or even a worse accident.

27. Then, according to the old saying, that "two heads are better than one;" if any advice was to be taken it ought to be taken at that time?—Certainly. I am not sure that "two heads are better than one" in these cases. One man may be the responsible person, and the other man may be an irresponsible person. The engineer of the undertaking is responsible for a great many things; he is responsible for the proper construction of the works, and for the safety of the public; but, apart from that, he is also responsible that the works shall not be constructed at an enormous and wholly unnecessary expense. You bring, perhaps, an irresponsible man on the ground, who wishes well to the public, and wishes to see the construction properly carried out, but does not care at all about expense, having no responsibility in that respect. Therefore, in order to secure his position, and to be able to say, "No reservoir that I have inspected has ever failed," he perhaps will have the embankment erected two or three times stronger than is necessary, and thereby put a stop to these works altogether; because none of the undertakers, whether they are corporate bodies or local Boards of Health, or companies, would voluntarily go to that expense.

28. In the making of that embankment, you say that the danger arose from the outside?—I said that the accident arose from causes which were external to the embankment. The fact is, that immediately below the site of the embankment and on one side of the valley, there is a hill of the length, I suppose, of half a mile, and there is a large quantity of clay in that hill, which is of a soft and moveable nature, and which has probably for thousands of years been slipping down gradually from the top. It happens that the outer slope of this embankment was made to rest partly on a hill of clay and partly on a bed of shale which was in contact with that part of the foot of the hill of which I am speaking. It appears that the hill being set in motion by heavy rains, pressed very heavily on the plate of clay and the shale at the back of it, and when it gave way it drove those parts into motion, and inasmuch as the back of the embankment rested upon them, the embankment was torn.

29. Ought not that state of things to have been known to the engineer before he began the embankment?—The engineer did know it, and he did provide as far as he in his judgment could foresee for that very contingency; but the effect of the slipping of the hill extended further than he supposed it would.

30. Is the present state of that site dangerous? The site is not in itself dangerous, but I should be loth under the circumstances to recommend that the reservoir should be reconstructed in that particular situation; not that I should fear that I could do it, and do it with perfect safety, but I should apprehend that the public would never have confidence in it.

31. Is it proposed to make the fresh embankment which is about to be made in a different spot?—That is what I intended to recommend. I only commence my duties to-morrow. I have not made any distinct recommendation on that subject hitherto.

32. I think Mr. Leather stated at the inquest before the coroner, that there were geological sections of the site of the embankment puddled-trenched; can you produce such sections, or do you know anything of them?—No.

33. You do not know whether any such sections were taken?—I do not, except from Mr. Leather's statement.

34. Then, I suppose, you really know very little of what took place at the coroner's inquest?—I know, I think, nearly all that took place at the coroner's inquest; I was present at part of the examinations, and I read all the evidence which was given when I was not present.

35. Do you recollect Mr. Gunson, who gave evidence there?—I do.

36. Was he the resident engineer?—He was.

37. Did not he state before the coroner that he had told Mr. Leather that it would not be safe to place the embankment on the intended site?—On the original intended site. I do not know whether those were the exact words; but I know that it was felt both by Mr. Gunson and Mr. Leather on examination that it would be desirable to alter the line of the embankment, and the line of the embankment was altered accordingly. I do not know the exact words in which Mr. Gunson made his representation.

38. You do not know whether those words of Mr. Gunson's applied to the original site, or to the second adopted site?—I know they applied to the original site.

39. You think that the change in the site was in consequence partly of that suggestion, and that on investigation Mr. Leather was satisfied that the second site he had chosen was safe?—Yes.

40. And the event proved that his judgment was wrong?—In the way in which I represent it, namely, that there was an external cause which produced the accident; and certainly Mr. Leather did not apprehend that that external cause would come into operation.

41. But that external cause was apparent, I suppose, to a scientific inquirer before the site was chosen?—No, I think not; it was apparent on the original site, but not on the site which was ultimately adopted. I should not have expected

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that particular plate of clay and the shale which I have referred to, to have moved from the rolling of the clay on the hill side.

42. After your past experience, if you were in a position to be called upon to make choice of a site, would you take into consideration that danger?—Certainly; all these things make us more careful and cautious, and they give us light on subjects which may have been in obscurity before, and perhaps but little regarded.

43. In building so dangerous an embankment, or one that might lead to such great danger, should you think it was sufficient inspection to go two or three times only over the embankment whilst it was being made?—That depends very much on circumstances, and the particular position of the gentleman who is engaged. I understand that Mr. Leather, although he designed the work, was really more in the position of a consulting engineer with regard to controlling the operations. The operations themselves were entrusted certainly to a very good and a very experienced man, namely, Mr. Gunson, and Mr. Gunson called in Mr. Leather when he thought it necessary to make any communication to him, such as would necessitate a view by Mr. Leather.

44. You think that mode of proceeding safe under such circumstances?—I know a great many reservoirs which have been made under similar conditions, and which have been perfectly successful. Mr. Gunson was not a common man; he was a man whom I have no hesitation in saying, in the absence of Mr. Leather, could have carried out such a work himself, and on his own responsibility. Mr. Gunson is a very superior man indeed in his position.

45. Have you at present any knowledge of the material with which that embankment was made?—Yes.

46. Do you think that material was the wisest and the most proper for its purpose?—The material was perfectly good for the purpose; and that is best evidenced by the fact that the embankment itself had not slipped in parts. The planes of the embankment were perfectly straight, and where they have not been disturbed by the rupture they are straight to this day. The embankment is in itself a perfectly good embankment, and the material of which it is composed is good.

47. And that you say now, after your full experience of what occurred?—Certainly; and there is a general concurrence of opinion amongst experienced persons on that part of the matter.

48. Shall you take now any greater precaution in the building of this dangerous embankment?—You interpose the word "dangerous;" I should be sorry to admit that it is dangerous.

49. Has it not killed 200 people already?—Yes; but I was not aware that you were alluding to the embankment which failed, and I thought you were alluding to the embankment to be made. I do not propose to reconstruct that embankment.

50. But you are to make an embankment for the same purpose, pretty nearly in the same place, and in which all the same dangers will have to be incurred?—No, I think not; because I shall avoid this moving hill, and therefore I shall get rid of that part of the danger.

51. You think there is a spot on which there will be no reason for the public to feel anxious when you have made your embankment, and filled that large reservoir with water?—I think so; but of course I shall not advise any particular site until the ground has been very carefully explored, and until trial holes have been sunk to a very considerable depth, and until, indeed, the trial holes are sunk to a perfectly water-tight stratum.

52. Then it may be taken as a general statement from you, that the accident arose from a land-slip?—Yes.

53. And that land-slip was outside the embankment, and might have been seen if inquired after before the embankment was made?—It was seen, and was known, and was endeavoured to be avoided.

54. And it was not avoided?—The land-slip itself was avoided, but it was not expected that the pressure of the slipping ground would set this particular stratum in motion, and drive it before it; it was supposed that the land-slip, as most land-slips are, was superficial, and that it would ride over (if I may use the expression), if it did move, this particular stratum; there was no apprehension that that stratum itself would move.

55. Would not inquiry have taught the engineer that that would not be the case?—No, I think not; that was altogether a matter of judgment; and I am bound to say, although I do not like to say it, that I might have committed a similar error of judgment.

56. You stated just now that there were no springs on that part of the site?—No; there were springs behind, and a little rill.

57. When you say behind, do you mean above?—In that valley that I have spoken of as intervening between the original site and the site finally adopted. There were also springs in the bed of the reservoir.

58. Do you think those springs had nothing to do with the accident?—Nothing at all. What occurred with regard to the large spring in the bed of the reservoir, not very far from the embankment, was this: the puddle-trench was cut down far below; the ground on each side of the puddle-trench was very open and porous; the spring followed the trench down, until they came to the water-tight stratum, and then, upon the puddle being put into the trench, and being gradually brought up, so the spring came up with it, and at last issued at the point at which it had originally issued. That very distinctly showed that they had gone down with the puddle-trench to the water-tight stratum. If that had not taken place, the spring would have gone under the puddle-trench, and would have issued at the back of the embankment.

59. Making that puddle-trench and determining on the depth of it and the propriety of the depth, is a matter of great importance, is it not?—Of the greatest importance.

60. And that ought to have been done by the engineer?—It was done by the engineer.

61. Was that done by Mr. Leather?—It was done by Mr. Leather. Mr. Leather visited the spot, inspected the puddle-trench, and assured himself that they had got down to the water-tight stratum.

62. Through the whole length?—I believe through the whole length. Of course, not having been present I cannot speak to that, but I believe it from all I have heard.

63. You think that all human prudence was exercised in making that puddle-trench?—As regards

regards the depth of the puddle-trench, I think certainly, by the fact that the reservoir had been filled with water to a very great depth for nine months previously to the accident, and had exhibited no signs of leakage.

64. Is it one of the precautions to be taken in making an embankment of that sort, that there should be some mode of letting off the water?—Certainly.

65. What is the mode which is usually adopted?—There is no usual mode. A great variety of modes must be adopted according to the formation of the country, and according to all the particular circumstances of the case. In some instances, but those instances are not many, the side channel is cut and the water is brought from the brook or the river at the head of the reservoir, round by the side channel, so as to become diverted from the sight of the embankment altogether. That is a very exceptional mode of constructing works of this kind, and in many cases induces more danger than it prevents; for this very often happens; floods of such an excessive character may happen, that any channel which it is practicable to make in a steep and rocky country is not adequate to convey those floods, and then they overflow and get into the bed of the reservoir in some other way, and perhaps fill it up and wash away the embankment, which is then in course of formation. I have made very large reservoirs myself, where it was quite impossible to make any such channel. The second reservoir of the Liverpool Waterworks, I suppose, is a mile and three quarters long, and that reservoir is made in a valley, which runs transversely to the side of the mountain, and streams come down from the hills into it at a right angle to the bed of the reservoir; and on the hill-side there are precepitous rocks, and it would be impossible within any reasonable limits of expense, if not physically impossible altogether, to collect the water on that side of the valley and bring it out of the other side. That is a particular case. Where the reservoir instead of running transversely to the brooks and to the slopes of the hill, runs parallel with them, it is in general possible, but not always so.

66. Was it possible in the case of the Bradfield Waterworks?—It was, and it was done.

67. And there was really a sufficient mode of exit for the water, if that exit had been opened?—No; that had nothing to do with the water; the reservoir had been closed, and water had been collected in it as a finished reservoir for many months before the accident took place; this channel had been done away with; there was no object or purpose in the channel any longer.

68. What exit for the water existed?—The exit was by means of a large weir and bye-wash, and by means of two pipes which were placed near the surface of the ground on which the embankment stood, and which ran from the inside of the reservoir under the embankment to the outside.

69. What size were those two pipes?—I think they were two 18-inch pipes, if I recollect.

70. And those you think large enough for a reservoir of the size of the Bradfield Reservoir?—Perfectly large enough for the purpose for which they were intended, but not at all large enough to carry off floods; the flood would have to go over the weir.

71. The usual mode of protecting yourself from danger is to allow the reservoir to fill and run over?—Certainly.

72. And you do not think there is any danger, although danger existed in that case, of the embankment bursting before the water overflows the embankment?—No; the reservoir is intended always to be filled up to the level of the weir; and whether there were pipes underneath, or whether there were not, as long as the water was impounded to its intended height, there would be precisely the same danger.

73. What was the use of the water-pipes at all?—The water-pipes were to let out water for the supply of the mills in the town of Sheffield.

74. Then the pipes were not used as a mode of precaution against danger at all?—No; they would operate to the extent of their magnitude as a precaution against danger, but not beyond that.

75. You think there is no necessity in such a case of any sluices to let out the water, when the water becomes dangerously high or danger exists?—There is no possible means of letting out floods collected from extensive drainage reservoirs in any case; there is not a single case in England, I believe, in which that could be done.

76. So that you must always incur the danger, do what you will, of the embankment breaking, and you cannot take any precaution against it by letting out the water?—I do not think the floods have anything to do with that danger, because after a flood has subsided, and before a flood has come, the reservoir is just at the same height, with the only difference that perhaps the water may run over a foot or two deep at the weir; but there is really no difference in the pressure whether a flood is existing or not, and the danger is the same.

77. Does not the pressure arise from the depth of the water?—It does.

78. The question put to you was, can no precaution be taken by means of letting off the water when danger is apprehended, but must you keep it there impounded?—I answer, that there are no such means; I apprehend what you intend to convey to me is this: in case of sudden danger, by any means which are practicable, it would take not merely many hours but many days to empty a large reservoir. In the case of sudden danger, such as I apprehend you are referring to, it would be necessary to let off the water in a few hours or in a few minutes, and there is no possibility of making works for that purpose, with respect to large reservoirs.

79. Is not the practical conclusion thence, that an embankment is a great danger, and that it ought to be made with every possible precaution for its safety?—Certainly.

80. Amongst those possible precautions, do you conceive that inspection would be of any use?—The word "inspection" includes so much that I scarcely know how to answer the question. Inspection after a reservoir is made is of very little use as regards the sudden emergency. Inspection during the course of construction may be useful; but inspection supposes supervision, and supervision supposes superintendence, with all the power to give what the inspector may think to be necessary directions. In that case an inspector, whoever he may be, or whatever may be the authority under which he acts, must take the responsibility; and there is the real difficulty. I should be very glad to have reservoirs which I am constructing inspected, because

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so far as I am concerned, I should feel relieved of a great deal of responsibility; but I do not know that it would be very beneficial to the public.

81. What is the case with regard to Railways, is there not inspection there?—Yes; but that is quite a different kind of inspection; that is an inspection with regard to constructions which are under the immediate eye of the inspector; there is no insidious and secretly working agent like water operating in such a case, and the existence of that agent and its particular mode of operation constitutes the great difference between the two cases.

82. Supposing you have got to cross a valley by a viaduct, the foundations of that viaduct are liable to all the dangers as the foundation of an embankment; are they not of the same insidious nature that an embankment is subject to?—No, because there is no external agent operating in that case. The embankment stands on a certain base, which, if it sustained it for a day, would probably sustain it for a thousand years, if there were no other agent to act in a disturbing manner; but here you bring in an external agent—a mighty agent—which operates on the embankment, operates on the foundations, operates in a way that you cannot see and that you cannot even suspect, and that is not under the perview of any inspector; and if that were to take place with regard to a railway embankment, mere inspection by a Government officer would be utterly useless.

83. Then, supposing this aqueduct was built on this shifting sort of foundation, do not you think that would be of the same nature, although it might differ in degree, as the danger of the embankment and the reservoir?—No; because with regard to a railway viaduct, although it may be placed on a bad base, and although it is possible that the base may give way, yet there is nothing in the nature of the pressure of water, and there is nothing in the nature of that permeation by water through the strata and the water over the surface; it does not act under pressure in that case; it may be close to a river, and the river is running over the surface; it may moisten and soften the bed on which the viaduct is placed, and the viaduct may give way. But that is a totally different case from the case of an embankment; the water may go under the embankment, and act with all its pressure, and may consequently move the back of the embankment away, and the whole thing may come down. An inspector could do nothing in that case, he could not see there was such an agent at work; I mean, ordinarily. Where water is issuing out in volumes, an inspector could be called in, who would say, I do not think this reservoir is safe, and I require it to be emptied, and it shall not be used until it is made sound; but that is not the case of inspection to which I suppose you are addressing yourself, namely, inspection during construction, with a view to the prevention of any such events. Undoubtedly, an *ex post facto* inspection could be made.

84. The inspection to which I particularly wished to direct your attention was, inspection during the construction: and I think one of the answers you made was, that that sort of inspection would lessen your responsibility?—Certainly.

85. Is not that inspection now going on with regard to railway works; and would not that inspection, if applied to a viaduct, diminish your responsibility in the same way?—No; inspection with regard to a railway work is of this kind, that if the inspector does not think the work is sound or strong enough, he can prevent the railway being opened; but he has nothing to do with the process of construction. The inspection which you would require in the case of a reservoir would be, inspection during the progress of construction; because you cannot see the interior of the embankment afterwards; you know nothing at all about it. With regard to railway works, you can see almost everything; and inspection, after a railway is completed, is perfectly efficient for all the purposes for which it is intended. An inspection, with regard to waterworks, made in the same way, would be perfectly inefficient.

86. Is inspection after construction, in the case of a railway embankment, sufficient?—It is so.

87. Have you never known a railway embankment give way?—Yes; railway embankments have given way by slipping; but, amongst the constructors of railways and reservoirs, there is a saying which amounts almost to an adage, that with regard to a railway embankment, if it will not stand it will lie; but that with regard to a reservoir embankment, if it will not stand, it will not lie; that is to say, that you may go on adding to a railway embankment until, somehow or other, you may make the embankment bind, although it is slipping from time to time; but, with regard to a waterwork, if it does not stand, the whole thing is washed away, which is a different condition of things.

88. In the case of waterworks, the danger is greater?—The danger with regard to waterworks is a thousand fold greater than with regard to railways.

89. And in that case you think there is less need for inspection?—No; my answer is with regard to the efficiency of the inspection, how it must be conducted, and what must be its result. An inspector coming on the ground, and seeing something which in his opinion is not to be approved of, must have power to direct that that thing shall not be done, and that something else in its place shall be done.

90. Suppose that the inspector comes and sees something that he disapproves of, he states his disapproval, and leaves the responsibility with the Company, to go on with the work as they are going on with it?—I do not think that mode of inspection would answer at all; and I do not think that any Company would undertake the responsibility of such works as these on that footing.

91. How would the responsibility be greater, when they were warned of their danger?—This would happen: suppose I were making a waterwork, and exercising my best judgment and discretion, and taking all matters into consideration which it is my duty to do, both as regards the public, and the parties for whom I should be more directly acting, an inspector comes on the ground; perhaps he, himself, has very little knowledge or experience on the subject; he may be a theoretical man, as is most likely to be the case.

92. If that were the case, would he be a good inspector?—No, a very bad one; but it is just the kind of inspector whom I apprehend would be most likely to be found; I am not speaking with any feeling on the subject.

93. Only from your knowledge of inspectors?—From my knowledge of inspectors. I think inspectors would know very much less, in general, of

of these matters, than the engineer who is entrusted with this particular class of undertaking; he would come, and he would have a notion on the subject, and he would represent, probably, that something should be done, either of a very expensive character, or about which the engineer in charge would differ; that would have to go to the Company, then the Company would be in this fix: they would say, what are we to do; here is an inspector who, our engineer says, does not fully understand this subject, and he recommends so-and-so; if we do that, the engineer says, not only that it is unnecessary, but that is a worse mode of doing it than he himself has prescribed: but, on the other hand, if we do not do this worse thing, we shall get into great responsibility; and they will say, possibly, "Now, what is the expense. Is it much more costly?" And if the answer is "No," they will say, "Then let us do it, and we relieve you, Mr. Engineer, of the responsibility of this operation, and the inspector must take it."

94. Does your knowledge of inspectors, their character, and their efficiency, arise from your knowledge of the inspectors who now inspect railways?—The inspectors who now inspect railways are gentlemen in every sense, and I have nothing to say against their general good judgment; but they have to deal with matters of solid construction, and they have nothing at all to do with fluids: I have been 35 years in this branch of the business, and I am still a learner; and I think that an inspector who comes fresh and novel to this kind of business, would not be the very best man you could put over me; but I should be very glad to give him the responsibility.

95. Do you think that railway inspection conduces at all to the safety of the public?—I do. I think it has been productive of a very great deal of good; originally it was not very well conducted, and gave a great deal of dissatisfaction, and very reasonable dissatisfaction too; experience has been gained, and I believe that the system of inspection, as now conducted by the Board of Trade, is beneficial both to the public and to railway companies themselves; it is of a very reasonable kind, and I think there are very few persons who complain of it, except in particular cases, where it becomes a matter of discussion.

96. Are you aware what took place at Holmfirth in 1852?—Yes; I was on the spot, as soon as possible, after the accident occurred.

97. That was also an embankment?—Yes.

98. Was there any inaccuracy or error in the formation of that embankment?—That accident, I am sorry to say, was wholly due to neglect, gross and long-continued neglect, and might have been averted by the most simple means.

99. Supposing that Government inspection in that case had existed, would not the Government inspector have been able to see that gross negligence was being committed?—He would.

100. Would not inspection in that case have been beneficial?—Very beneficial; but that is not the kind of inspection that I was referring to in a previous answer. I was answering with regard to inspection of construction. Inspection of management is quite another thing.

101. Will you explain what was the mischief there?—The mischief there was of this kind: the embankment was allowed to become low in the centre, as many embankments do by subsidence and compression: the drawing-off valve at the bottom was allowed to become fast, so that it could not be opened; the shaft which constituted the bye-wash was a stone shaft, projecting up, with a rim round it just at the top, and a few feet below the proper level of the embankment; but the embankment was allowed to settle, and the stones at the top of the bye-wash were allowed to continue at their original height; the consequence was that, when a flood came, the water, instead of running down the swallow, passed over the top of the embankment, and washed away the stones, and the whole thing rolled over. It was known that it was going to occur, and about a hundred people were collected round the place to see what they conceived to be a very fine sight; they were there for the purpose; it was well known that such a thing was going to occur, but the Commissioners took no heed; they had quarrels among themselves; and the calamity, attended with a tremendous loss of life and property, resulted from a negligence which might have been prevented by less than three hours' work. All that was necessary was to destroy the stones at the top of the swallow hole, and to let the water go down there instead of going over the top of the embankment.

102. Could anything of that sort have been constructed at the Bradfield Waterworks?—A much better thing than that was constructed at the Bradfield Waterworks; there was a large open weir, 60 feet wide; and that is there now.

103. Was that weir employed on that occasion to let out the water?—It could not be employed, because the water had not reached that point. The water was about six inches, if I recollect right, below the weir, at the time of the accident.

104. Therefore, the letting out of the water was not efficient, because it did not let out the water that was dangerous?—It was not the water that was dangerous; it was the slip of the hill behind that was dangerous; there was no danger in the water itself.

105. The water was the weight, and if you could have relieved the weight from the embankment, you would have taken away the danger?—No; the very same thing would have happened as regards the injury to the embankment; but if the water had not been there, it would not have run down the valley and occasioned all this destruction.

106. I am not speaking of the danger to the embankment, but the danger to the public. If the water had been let off, although the embankment might have been afterwards good for nothing, there would have been no danger to the public?—No; but what occurred was this: the reservoir was nearly full, and it would have taken a fortnight to have run that water off.

107. Mr. *Smollett.*] By what means?—By means of valves under the seat of the embankment. You cannot get off the water collected in large reservoirs with sufficient rapidity to avert such an accident as that which happened at Sheffield. I think the first indication occurred about six o'clock in the evening, and it did not appear to be a matter of any consequence. The whole was over, and the calamity had occurred by about 11 o'clock; and it would have been utterly impossible by any known means, to have let off the water.

108. *Chairman.*] Would it not have been advisable to have had a flood-water channel or goit, so as to have maintained a thorough control over the

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the storm water and prevent its entering the reservoir, if necessary?—No; the storm water had nothing to do with it. The reservoir was nearly full previously; and if there had been a channel of that kind, it could only have been at a still higher level. No channel water would flow out of the reservoir; the water is collected in a basin, and the flood-water channel is always placed above the edge of the basin, and it must necessarily be so.

109. Then we are to come to this conclusion, that when a reservoir is filled, whatever danger there is, it must be incurred, and you cannot prevent it?—The danger from the water collected in the reservoir—that danger which arises from the water if the water should escape—is inevitable. The danger to the embankment is one thing, and the consequential injury occasioned by the water is another. I think that a sketch would perhaps enable me to explain myself better. [*The Witness drew a Sketch, and explained.*]

110. Holding in my hand the Sketch you have made, I direct your attention to the bottom of the embankment; could you not have pipes large enough, at the bottom of the embankment, to draw off the water, and so render it less dangerous?—No; not within the period during which the danger would be imminent. Of course we have pipes by means of which we can entirely empty the reservoir; but that is an operation which requires many days. The danger is imminent within a few hours.

111. And you think that as the danger arises from the weight of the water, and the weight of the water arises from its depth, there would be no advantage in having pipes large enough to make the water more shallow in a short space of time?—The danger, so far as the public is concerned, does not result from the weight of the water, but results from the volume of the water. If you have a very small reservoir, although it may be 100 feet deep, the danger to the public is very much less than if it were a much shallower reservoir and contained 10 or 20 times that volume of water. The question is, how it would be sustained. It does not arise simply from the pressure; but the question is, whether you can sustain the water, and retain it in the reservoir, so that it shall not operate on the back of the embankment; that is, so far as the water itself goes. At Sheffield (reverting to that again) that was a very exceptional case. As I have said before, the cause of the accident was not in the reservoir itself, but was external to the reservoir; and in dealing with this subject in a broader view, I apprehend that the Sheffield case may be thrown almost entirely out of consideration on that ground, because the cause of the accident was so very exceptional that you cannot, in any way that I can see, legislate specially with regard to that case.

112. No precautions that can be suggested would enable the Legislature to diminish the danger to the public arising from such a reservoir?—That is a very wide question. I think that a reasonable inspection, after construction.

113. Not during construction?—During construction involves this: that the inspector must be himself a very experienced person, such a person as could properly control the engineer in charge, and such a person as could either accept the responsibilities of his own directions himself, or would be able to accept them on behalf of the authority by which he was appointed; I have studied the subject, I assure you, with a view of making any suggestion on that subject that should occur to me, because I am quite alive to all the difficulties of the case; but I can see no way of dealing with the subject, by way of inspection, during construction, unless the inspector is to accept the responsibility of his own acts.

114. And inspection after construction, as you have already stated, is utterly useless?—No, I do not say so; I say that I think that inspection after construction would be very valuable; not with regard to the construction which has been made, but with regard to the proper management of the reservoir; suppose, for instance, an inspector were to come and see manifestly that there was a large leakage from a reservoir, of course he would be quite competent to act, and no responsibility would devolve upon him in consequence of doing what I am supposing he would, in such a case, be allowed to do; he would at once say, "This reservoir is not in a proper state either of construction or maintenance," or something of the kind, "and I think that the safety of the public demands that it should be drawn off." I see no objection to that; but when you ask me, as to what an inspector could do with regard to the construction of a reservoir by an after inspection, that is quite another thing; he cannot see into the heart of the embankment; he can form no sufficient judgment as to whether the reservoir is a sound reservoir or not; he can only judge by events; and if you put it in the power of an inspector to go round and say, "Now you, the Water Company, or the Canal Company, are not properly maintaining this reservoir;" or, "You have not properly made it, because I see it is not sustained, and therefore you shall do something to it, or you shall not be allowed to retain it in its present filled and dangerous state;" all that can be done, and can be done for the advantage of the public. But that is quite a different thing from inspection during construction.

115. Supposing that an efficient inspector could be obtained, a thoroughly scientific man, who knew how to make a reservoir, you think there would be no advantage in the Government sending such a man down from time to time, to see how that embankment was going on?—I think, with regard to the construction of a reservoir, if you could have a perfect man to consider the construction of the reservoir, there could be no objection to his having all the powers you could put into his hands; but I know these men are imperfect, and I know that you cannot get perfect men for the purpose; and therefore, without having the least objection to an inspector myself, I venture to state, that if anything of that kind be attempted, it will, in my opinion, prove an utter failure.

116. Do not suppose for a moment that I believe that perfect science makes a perfect man; but I want to know whether an efficient engineer, looking over a work of that sort, does not put on the engineer who constructs it a certain degree of pressure, to make him do his duty?—I do not think it does; I do not know whether it would have any effect on those by whom the engineer is employed. I am sure that no competent waterworks engineer feels anything else than the greatest possible weight of pressure, as you express it, which you can imagine to be put upon him. I am sure that I never made a reservoir in

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my life (and I do not think that I shall), without having a great many sleepless nights in consequence of the weight of the responsibility which is put upon me. A hundred times I have wished myself out of that branch of the profession.

117. The result of your evidence is, that in the case of the Sheffield Waterworks every precaution that science could suggest was taken to prevent mishap, and that, taking that as an illustration, no precautions which the Government could suggest would lead to greater security on the part of the public?—I would not say, "every precaution;" I know of none that were omitted; I think that the engineer generally exercised a good, but nevertheless, as the event turned out, an erroneous judgment; he did all that a man could do reasonably; it may be that another person might have thought otherwise; you cannot, in matters of science and practical operations, make any two men agree; it might be that somebody else would have done the thing differently; it might be that somebody else would have done it worse; all this is matter of skill. Whilst I am saying that, I have in my mind the case of a medical man as well as of a reservoir constructor. We can only exercise our best judgment in any case.

118. And that you think is the only security the public have?—That, I think, is really the only security that the public have in any case in which skill and experience is necessary to be imported into practical operations.

119. Where those pipes were situate in that embankment, are you at all aware whether there was any leakage along the pipes?—There was no leakage.

120. And you do not think those pipes in any way contributed to the bursting of the embankment?—They did not. I had this experiment made; the pipes were stopped at the outer end, and a very heavy pressure of water, a pressure much greater than the entire weight of water in the reservoir, was put on them by means of an hydraulic apparatus; the pipes remained tight; a gauge was fixed which indicated the pressure which was put on the pipes by the machine; if there had been a leakage from the pipes, that machine would not have indicated the pressure, but it did indicate the pressure, and it sustained the pressure.

121. Although the leakage did not take place through the pipes, could it not take place outside the pipes and along the pipes?—I apprehended the question in a different sense; you mean that the water could have followed the course of the pipe from the reservoir without passing into the pipes.

122. Yes?—Yes, it might, but it did not.

123. Do you happen to know whether such a mishap as I have just suggested, has ever taken place in any reservoir with which you are acquainted?—There have been many such mishaps; that is to say, by the leakage of water underneath pipes laid in a manner similar, in some respects, to the manner in which this pipe was laid; but I am not aware of any serious accident having arisen from that cause; it has been seen, and in general has been remedied; but these pipes were laid in a particular way, and in a very unusual way; and I attrribute to the precautions taken by Mr. Leather, in that respect, the fact that the water did not follow the course of the pipes. Mr. Leather took a precaution which I had never known before, and which had not occurred to myself, and certainly it was effective for the purpose. Suppose on the sketch which I have now made this to be the puddle wall, and this to be the natural level of the ground, and the pipe having to pass through the puddle wall, Mr. Leather took this precaution; he foresaw that the pressure of the puddle wall on the pipe might either break it, or that if the pipe was strong enough to resist the pressure, the puddle between the pipe would shrink away from it and leave a gap, and that water percolating through the embankment would follow the crevice, and get into the embankment, and do mischief; to prevent that, Mr. Leather cut a trench; and he laid the pipe in clay in that trench, and the consequence was, that the whole thing, if it had a tendency to settle, would settle equally, and there would be no crevice left below the bottom of the pipe. That is a precaution I had not known adopted before, and to that I attribute the fact that the water had not escaped in that particular manner.

124. So that, in fact, the whole of the engineering of those pipes is, in your judgment, perfectly proper and safe?—So far as I know, no mischief has arisen from the particular way in which that part of the work was constructed.

125. Directing your attention to the other reservoirs of that company, have you inspected them?—I have inspected all the reservoirs several times.

126. What is your opinion of them?—The reservoirs which are in use are, to the best of my judgment, in a sound and safe state. There is one reservoir in the course of formation, and, so far as I know, the reservoir, so far as it has gone, is also in a state which is safe.

127. Have you inspected that embankment which is in a state of construction?—I have.

128. How often have you been there?—I should think I have been at that embankment four or five times.

129. In what space of time?—The thing has been standing; no work has been done at it; I have never seen any work going on at it. The moment the accident occurred, the construction of the reservoir was suspended, and it has remained suspended until this time. My visits to the reservoir have not been with a view to construction at all, but merely in consequence of the occupation I have had on the company's business in Parliament and elsewhere.

130. You do not think that any further precautions could be taken to insure the safety of those reservoirs which are now at work?—Nothing but, if you can have to do it, insuring that the companies or the persons who are intrusted with these large works should employ competent persons. That is all I can suggest.

131. Do those pipes that you have described sometimes get out of order?—I think if they are once properly laid they do not get out of order. I have known this to occur, that when the back slope has slipped it has drawn down some of the joints in the outer part; but the precaution I take is generally to have the means of stopping the pipes inside the reservoir.

132. And then you are enabled to mend the pipe where it is broken?—Yes.

133. I think we may generally come to the conclusion that you believe that for the construction of embankments all the precautions which are taken are all that can be taken?—No, I do not say that; because it has sometimes happened, al-

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though I think in the present day very rarely, that these large works have been intrusted to persons who really have not been competent to carry them out; but I do not think that is very generally the case now. Sometimes very considerable reservoirs have been made by persons who had very little experience at all.

134. We may assume that the embankment at Sheffield was generally properly constructed, and that Government superintendence would not have increased the safety of the people of Sheffield?—I do not think it would; and I think that I have a right to come to that conclusion from this exceptional fact, that for months there was water to a very great depth in that reservoir, and nobody suggested there was anything wrong in it. The Sheffield people themselves had the opportunity of seeing it very often, and a great many of them did see it; and nobody, until they began to reason after the event, suggested that there was anything dangerous or defective about it.

135. Mr. *J. Tollemache.*] You consider that this embankment was formed on the best possible principle?—As far as the reasonable judgment of an engineer would go. An embankment, for instance, like that, is constructed with slopes at a certain inclination inside, and other slopes of a certain inclination outside; somebody else might say, "I would increase those slopes;" and another man might say, "I think that is too expensive, and you might take a portion of it away with perfect safety." All that is matter of judgment, so that I cannot answer the question in quite the general way in which you put it. There will be differences of opinion among engineers.

136. In your judgment, you do not blame the engineer?—No, I do not.

137. And you think this disaster was caused by a landslip which was altogether unforeseen?—Yes, and by the operation of that landslip in an unexpected manner.

138. How much of the embankment did that landslip tear away?—I should think the length of the crack was about 40 feet

139. Did it tear away the back of the embankment, or the front of the embankment?—The back of the embankment.

140. Had there been any landslip in that neighbourhood before this disaster occurred?—Yes.

141. You have spoken of this one landslip; had there been other landslips?—Yes, there were landslips in a great many places in all those valleys.

142. Therefore, a landslip of some kind was to be anticipated?—Not so, where the reservoir itself was placed. The engineer thought he had gone away, not merely from the landslip, but also from any effect which the landslip was capable of producing.

143. In the construction of the reservoir, was the base of the hill cut away so as to be likely to produce a landslip?—No.

144. As landslips were common in that neighbourhood, although not exactly in this particular spot, it is quite possible that the engineer might have foreseen this landslip?—The engineer did foresee it.

145. And he used every precaution in reason to guard against the mischief which would arise from that landslip?—Yes, according to the best of his judgment, and according to my opinion.

146. Whereabout were the sluices placed in this embankment?—The sluices were placed diagonally across the bank into the bed of the brook.

147. Whereabout were the valves?—On the outside of the embankment, close to the foot.

148. If sluices be placed in the very centre of an embankment, do they not tend to weaken the embankment in the centre?—No; it depends on the manner in which they are placed. With regard, for instance, to the Liverpool reservoirs, the sluices are built in masonry, at the foot of a tower.

149. Are you acquainted with the Woodhead Reservoirs?—Generally; I have been there many times.

150. Did they not show signs of weakness several years after their construction?—I think that Mr. Bateman will probably be a better person than myself to give you an account of them, for they were his work.

151. You would rather not express an opinion?—I would rather not express an opinion with regard to another gentleman's works.

152. Are you aware that recently the position of the sluices in the Woodhead Embankment has been altered, and that it is proposed now to cut a channel through a tunnel, so as to let off the water by a side sluice, instead of a centre sluice?—Yes; and there is nothing unusual in that. That is also done at some of the Liverpool reservoirs; but that altogether depends on local conditions.

153. Has not Mr. Bateman altered the position of the sluices at the Woodhead Embankment, because he supposed, and was at that time known to have supposed, that having the sluices in the centre tended to weaken the embankment?—No, I think not; I believe that what occurred at the Woodhead Embankment was this: that some of the pipes gave way, and there was leakage; and it was thought desirable, no doubt, to adopt this other method to remedy the evil.

154. And not to strengthen the embankment?—I think it had nothing to do with the mere desire to strengthen the embankment.

155. How long would it take to let off the Bradfield Reservoir by means of the sluices?—I did make an exact calculation at the time, but I forget it. About 10 or 12 days, I suppose.

156. I suppose that engineers who are employed by a company, in the way, for instance, that the gentleman who constructed these waterworks was employed, have to look to the interest of the company as well as to the safety of the public?—Fairly so.

157. They must construct the works as economically as they can?—With reasonable economy, having regard to the security of the work.

158. Under those circumstances, do not you think that it would be an advantage to the public if some eminent engineer, perfectly independent and free from any pressure on the part of the company, were employed to examine the works, either under construction or immediately afterwards, and previously to their strength being put to the test?—To the extent which I have mentioned; but I do not see what such an engineer could do; because, if a work is reasonably well constructed, no man can pronounce a work to be unsound until it is tried; no man going on a reservoir which is in a finished state, but not filled with water, can pronounce whether that reservoir will be tight or leaky.

159. Would he not be able to form some opinion upon its strength?—The laws of strength are

are so well understood, that I do not presume that any engineer now would make a reservoir which was not strong enough for the purpose, according to the rules of art.

160. Therefore, you think that no independent opinion of that kind would be of any value during construction?—No; if anything of that sort were to be done, it must be done thus: the drawings must be submitted to some competent engineer, and that competent engineer must take upon himself the responsibility of saying whether they are right and proper drawings, and whether any and what alterations shall be made; but that is a thing which would involve him in responsibility; it may be the judgment of this House that somebody should accept that responsibility.

161. You have stated that you think if an engineer of that kind were appointed, there would be great difficulty in getting companies to undertake these works, because they would not know the expense to which they might be put?—Certainly; I think that most water companies would cease to make applications to Parliament if they were to be placed under such uncertain inspection as would render it doubtful whether the undertaking could be executed for the amount of the estimate.

162. However, you would approve of an inspector being employed to examine the works, after the works had been constructed?—I have not the least objection to that; on the contrary, I think that much good might result if he were a judicious man, an experienced man, and a man whose mind was not filled with crotchets.

163. Suppose that such a Government engineer were to inspect works immediately after they were constructed, and gave his opinion that they were not constructed upon good principles, and therefore not safe; the Company, in that case, would be in the same position as they would be supposing the engineer had been employed in the first instance?—No; this would happen; the Company unfortunately would have laid out its money, and be placed in the position of getting no revenue unless it complied with the requirements of this engineer.

164. But I understood you to state that you would not object to that kind of inspection?—My observations did not at all go to that. My observations went to this, that after a reservoir was made and filled with water, or partially with water, it might be desirable that it should undergo some inspection, for the purpose of ascertaining whether it was leaky and sensibly unsafe.

165. Then a Government inspector, according to your opinion, should not be allowed to inspect works, or to report upon them, until they had been tried?—The trial should be under his direction; he may say, "Well, now this work is finished, you may shut the valves and impound water; I will come and see whether the reservoir is tight."

166. You think that in nine months he could pronounce whether a reservoir was safe or not, if his inspection were limited simply to that?—In the case of the Sheffield Reservoir, for instance, he would have been enabled to have pronounced on that question, so far as regarded all the lower part of the embankment, in the month of July previously; for there came a great flood and filled the reservoir to a great depth; and if the reservoir had not been built sound and substantial in its lower part, it would then have inevitably exhibited the defect.

167. Are there not cases of embankments which were supposed to be perfectly solid for a much longer period than nine months, and afterwards showed great signs of weakness?—I think not.

168. Was not that the case with the Woodhead Embankment?—No.

169. Surely the Woodhead Reservoir was filled a much longer period than nine months, and afterwards they had to lower the water from danger?—Yes, but it showed leakage.

170. Before the nine months had expired?—Yes.

171. You think that, supposing a reservoir shows no signs of weekness whatever for nine months, you may conclude that it is safe?—No; that is not quite what I was observing. The duties of an inspector (supposing an inspector to be appointed), I should imagine, would be these: assumed the reservoir to be made on the responsibility of some other engineer, he then goes down to the place, and he says, "Now this work is represented to me to have been completed; I assume for the moment it is properly completed, but I should like to see whether it is water-tight; now begin to put water into it." Water is put into it; he goes down again, and he finds there is no leakage; he says, "Very well, now you may go on and put more water into it;" he looks at it perhaps again, and he finds there is no leakage, and he says, "You may put more water into it;" he goes down again, and he says, "You may fill it;" he goes down again, and he says "Now I see there is no leakage with the reservoir filled, and everything looks proper and safe; you may begin to use the reservoir." It may happen that the reverse takes place; he goes down, and he finds at one of these stages that there is leakage; he inquires where the leakage proceeds from, as far as he can get any information, and he says, "This leakage arises from imperfect construction; it may render the reservoir unsafe, and I do not think the reservoir, in its present state, ought to be used." That would be a very proper thing for him to say; and in that case the undertakers ought not to be allowed to use the reservoir until the defect in the reservoir is remedied. Again, I do not object to this; we know that from motives of economy, or other causes, undertakers are only too liable to neglect, in some degree, the maintenance of a reservoir, as was the case at Holmfirth. If an occasional inspection were made, by a proper officer, he would be able to say, "Gentlemen, I think you are neglecting your duty; this reservoir is getting out of repair, and you ought immediately to attend to it." And they ought to be bound to attend to it. I see no ground at all for resisting any inspection which may be made for those purposes; and if it was thought to be proper, on the part of the Government, to supervise the construction of reservoirs, provided the Government took the responsibility of their own acts, I see no objections to that. I should like it myself; but I am quite sure that no Government will accept that responsibility, and therefore, I say that no inspection, in that stage, can be usefully applied.

172. In the first case, you supposed that the inspector would say "There is leakage here, and therefore some portion of the works must have been badly constructed; otherwise, this leakage would not have arisen; but, it having arisen, I cannot allow this reservoir to be filled with water to a greater height, without the leakage being stopped."

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stopped." Do not you think, under those circumstances, if that gentleman had inspected the works during their construction, he might have seen, during the construction, the part which proved to be weak afterwards?—It is just possible, but most highly improbable.

173. Mr. *Kendall.*] I understood you to state that the landslip was known beforehand, that the locality was known, the danger known, and that it was, as far as engineering skill could go, in your opinion, avoided?—Yes.

174. But that the landslip occurred afterwards which you think that no one could anticipate, and that the landslip had a pressure on another matter, which other matter did tear that which was necessary, namely, the centre part of the dam, and therefore the destruction followed?—Precisely.

175. That is your view of the case?—Yes.

176. As far as the construction went, the puddled-trench was done with more than ordinary care, and was perfect of its kind?—Yes.

177. And the material was quite sufficient?—The material was good.

178. And the width and height were enough?—Yes.

179. And that no engineering skill could have anticipated that the pressure of water would destroy that dam?—That is my opinion.

180. And you think there was ample care taken that in case of a flood there should be an escape for the water, and that there should be no pressure which would be dangerous?—Certainly.

181. Is it your opinion that the accident did not occur from want of precaution or want of inspection, as far as a judgment could be formed?—Yes.

182. As far as that goes, you hold that the accident at Sheffield, which has been a very serious accident, cannot be used as an engineering argument for Government inspection?—That is so; that is to say, a Government inspection having reference to construction.

183. You seem to object to a Government inspector, and to think that he will be of no use unless he is a sort of master of the works, and has power to alter them as they go on?—Yes; no use unless he takes also the responsibility.

184. You raise this difficulty, that he may increase the expense materially?—Yes.

185. And you think that a company will hardly come for an Act of Parliament if they can be so interfered with?—I think so.

186. Do you think that you would find a contractor who would contract for a work where he was to have a party over him who should have the power during the progress of the work, to direct a deviation from the original plan?—There would be no difficulty, on the part of the contractor, because contractors are only too fond of extras, and too much alive to the extra profits they get by means of extras.

187. That being the case, it would make it more difficult as far as the company were concerned?—Certainly; it is the conflict of interests that I wish to draw the attention of the Committee to.

188. Lord *R. Grosvenor.*] Is it not true that on this particular branch of engineering, there is more difference amongst engineers than on almost any other branch?—Necessarily so, because they have an additional agent to deal with; and there are divers opinions with regard to the particular mode in which water will operate. We have always to predicate of the future; with regard to the inspection of a railway, the inspector has only to look to the past. We have to form the best judgment we can as to what will happen when this agent, which is not present at the time, but which is to be made present afterwards, is brought into operation; and there is the difficulty.

189. Then is it not true that a Government inspector might be a man at the head of his profession, but still his views might be totally opposed to yours, and that he might object to your plan on first principles?—He might. But with regard to inspectors, in order that I may not make the observations I am about to offer invidiously, I will assume that I have the honour to be appointed the inspector. What should I do? I should go round the country and look at these works, and my first private feeling would be that I should not have the reservoir to make safe, but myself. I should then set about to consider whether there was anything which, however improbable to happen, might happen, and which a suggestion of mine, made regardless of expense, would possibly prevent; I should make that suggestion as a matter of course, and I should make it in my own interest, and in the interest of my employers; but still the suggestion might be so unnecessary, in the mind of the engineer in charge, that he would not like to adopt it. Then what is to be done? The engineer in charge has good reason for one view, and the Government inspector has, for other reasons, which are possibly good according to his view, another view.

190. On the inquest, I think, there was a question about the clay of the bank being made in four feet tips, and that was supposed to be objectionable. You have given your opinion that the puddle-wall was perfectly firm and solid?—The puddle-wall was perfectly firm and solid, and remained so; and anybody who is interested in it can, by just clearing away a little of the fallen soil, assure himself of that fact; it remains there; and that cannot be matter of controversy.

191. If you had been the engineer of that embankment, and the contractor had made it in that way, you would not have objected to it?—The contractor only obeys the engineer. The engineer has to make designs which the contractor must follow; and therefore it is not at all a matter of judgment to the contractor, except as to the application of the material which the engineer requires him to use.

192. And it was made, I believe, with four feet tips?—Some part of it; but that depends entirely on the quality of the material. Four feet tips in clay would be very improper things. Four feet tips of stony matter would not at all be improper. It depends altogether on the nature of the material.

193. In this case you would not have wished it made better?—In my judgment I should not have used those high tips, because I am not in the habit of seeing them: I do not say they were not properly used; but the remains of the embankment quite indicate to the mind of any professional man that the construction was stable and sound; I cannot put it stronger than that.

194. That is just one point where you and the Government inspector have differed?—Yes; but the Government inspector had not my opportunities of judging. When he gave his opinion it was given on the spur of the moment, at the coroner's inquest, which took place directly after the accident;

dent; we have since had many opportunities of learning all about it; I do not think it ever occurred to the Government inspector at the time, and probably if I had been inspector I might have fallen into the same state of mind on the subject, that it was occasioned by the breakage of the pipes, or something of that kind; but all that has been investigated since, and the real cause of the accident has been well ascertained.

195. Mr. *Hibbert.*] You have said that legislation upon this subject should apply to canals as well as to waterworks; do you mean to the canal itself, or to reservoirs for a canal?—I meant that it should apply to reservoirs and canals; if it be the object of the House, as the Bill leads one to suppose, to secure the public against the risk of accident from the bursting of reservoirs, it should apply to one description of reservoir as well as another.

196. You have also stated that the construction of reservoirs has been entrusted to incompetent persons; supposing that a report of the projected works, including a description of the area which is intended to be covered with water, the mode of construction, the foundations, the puddle-trench, and all other matters connected with the works, were laid before the Board of Trade before any of the works were undertaken, and that a Government inspector were appointed, would he not be able to ascertain whether those works were really entrusted to an incompetent person or to a competent person?—My idea was of another kind; I was speaking chiefly of reservoirs as they are sometimes made by persons who are not under Parliamentary responsibility. I was asked with regard to other descriptions of reservoirs; for instance, millowners' reservoirs. My opinion is, that if such a Bill as this, or a Bill reasonably modified based upon this, comes into operation, that with regard to reservoirs which are made subject to the requirements of the Bill, no incompetent person will be employed; I do not think they would dare to employ them.

197. Do not you think that if a report of the kind suggested were made to the Board of Trade, it would be a great advantage, in case a Government inspector were appointed, for would he not be able to see how the works were intended to be carried out, and whether they were being carried out according to the specification?—I do not think so, because a Government inspector will, generally, be a man of one idea, and what he would probably endeavour to enforce would be the same kind of construction according to his own particular idea in all cases, whether applicable or not; and it is not desirable, in my opinion, that a Government inspector should have those powers. Although I am not very desirous to allude to conflicts of past date, yet we all know what took place with regard to the old Boards of Health. There was a time when it was impossible to attempt to sewer any town without adopting, in a very improper, and useless, and injurious manner, the system of pot-pipes. Pot-pipes are useful no doubt in their proper place; but they were to be used, whether properly applied or improperly applied, for a particular notion prevailed in Government departments. Great mischief ensued from that; and I have no hesitation in saying, that if a Government inspector were to be appointed to look at these plans, his particular and possibly at all events mistaken views would have to be adopted.

198. I am not supposing for a moment that everybody would be obliged to carry out the Government plan; but what I wish to ask is this, whether in case the Government inspector, on seeing a report, or a specification of works, which were really not intended to be carried out in a proper manner, on a visit to the works during their construction, would not be in a position when they were constructed to say, "These works are not properly constructed, and therefore you shall not have the power of filling them with water"?—You mean, after their construction?

199. Yes?—That is another thing. After they were constructed he would, I am sure, if he were a wise man, disregard all points of mere construction; and he would say, "Let me test the soundness of the reservoir;" and he would be governed solely by that; it would be very improper that he should have the power to order a thing which might possibly, after all, be strong enough for its purpose, to be pulled to pieces.

200. I am not assuming that the inspector would interfere in the works; but would it not be an advantage, if he is to give an opinion after they are constructed, that he should have an opportunity of seeing them in the course of construction?—I have no objection to an inspector going down and seeing them in the course of construction; but I do not see what good he can do, unless he is to give some order and take some responsibility. I should say that the public are perfectly well protected if on trial the reservoir is found to be sound; and I do not know what more is wanted.

201. You have stated that no inspector could say, when the works were completed, whether they were sound or not?—He cannot do so without putting water into them; but what I suggested is this, that water should be admitted into them carefully, as far as possible in regulated quantities, and that he should have the opportunity of making inspections during the time of the filling of the reservoir, and after the reservoir is filled. Again, during the whole life of the reservoir he should have an opportunity of inspecting it; and if he finds any leakage he should say, "I think this reservoir is unsound, and ought not to be used, and I stop the use of it."

202. What objection is there to his having the power of inspection during the construction of the works?—Because he can do no good, and may do a great deal of mischief.

203. Supposing he were not empowered to interfere, would he not be in a much better position to form an opinion when the works were completed?—I think not. All that would happen is this, he is in a better position to find fault; he goes there and makes his own private notes, which nobody has the benefit of, and, when it is too late to do anything, he says, "Oh, I knew this was going to happen; I am certain this is not a sound reservoir; I see water issuing out of it; you were doing so and so on such a day, as I thought very improperly, and now I will not allow you, unless you re-construct this reservoir, to use it." Surely that would not be a very proper mode of inspection. If he is to inspect at that stage he should be enabled to order; and if he is enabled to order he must take the responsibility of his orders.

204. Is it the case that in Government inspection of railways the Government takes any responsibility?—No; but that is a very different case;

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case; there the inspector only looks at solid constructions, and he says whether those solid constructions are according to the rules of art adapted to weight; and here we have something more than the weight, and it is not the weight which is the thing, it is the insidious action of this enemy, water.

205. Mr. *Smollett.*] Partly weight? — The weight comes into operation afterwards, when the mischief is done, but it is not the cause of the mischief.

206. Mr. *Hibbert.*] Does not the Government lay down certain *data* on which all girder bridges are to be constructed?—No.

207. Do not they guide the contractor in any way?—No; a sort of understanding has grown up that a railway bridge shall have a certain excess of strength; that is to say, that it shall be constructed on the principle that it shall be capable of bearing at the moment of rupture four or five or six times the greatest load.

208. Those are requirements which are laid down by the Board of Trade?—Yes; but those are perfectly general; the engineer may make his bridge as he pleases, but the inspectors think it is desirable to have an excess of strength in it; they do not order how the bridge shall be made, or anything having reference to construction.

209. Supposing the engineer wishes the bridge to be made of a lighter material, and to make it of steel, would he be able to do so without the consent of the Board of Trade?—Certainly; all that would be required is this, that according to the known strength of steel, it should possess, without reference to its diminished area, this excess of strength.

210. I am told that it is difficult to get things of that kind passed at the Board of Trade?—That may be, because the inspector has some doubt as to the ultimate strength of that material, because everybody is not agreed on that subject.

211. Are not those requirements much of the same kind that would be required on the part of an inspector in the construction of waterworks?—Not at all; no such principles are applicable in these cases. We have not the principle of tenacity, for instance, which enters into the construction of iron bridges, applied at all in the case of waterworks.

212. The Government are not undertaking any responsibility in making these requirements at the hands of railway companies?—No, I suppose not; all they do is to refuse to open the railway.

213. In the same way, it might refuse to allow water to be put into reservoirs?—Yes, except that it would not be the best mode of doing it. The best mode is to put water in, and then see what happens. I do not mean what happens from the bursting, because there will always be the same manifestations of leakage.

214. Mr. *Smollett.*] You have spoken of the Holmfirth accident. Was there no way of allowing the water to escape when danger was manifest on that occasion?—A perfectly good and proper and efficient way; and that way had been in operation for many years after the construction of the reservoir; but the Commissioners were not a waterworks company, nor a canal company, nor a company of any description, except in this way, that they were millowners made by the authority of Parliament into Commissioners for impounding water for the advantage of their own mills. Those Commissioners were held to have no responsibility imposed upon them at all which could reach them or their pockets. They neglected their reservoir: there were many dissensions among themselves with regard to the maintenance of it; they wished to do things as cheaply as possible; they allowed it to run into a state of utter neglect and decay; and the result was, that the very provisions which the engineer had made, and which were afterwards sufficient, were not brought into operation; and it was not because they were not there.

215. Do you think that, in an engineering point of view, it is not practicable to have means for emptying a reservoir like the Sheffield Reservoir in less time than 10 or 12 days?—Yes; more pipes, or larger pipes, and larger means of outlet could have been made use of; and of course, the reservoir could have been emptied entirely in a shorter time. But what I intended to convey was this, that you could not make such an outlet as would have emptied off that large quantity of water in time to have prevented that catastrophe.

216. In other ways, if there was danger in the construction, there might be means taken to let the water off in a much shorter time than 10 or 12 days?—Yes; and I have put in much larger valves, in some cases, with a view to that; and I am doing so at a large reservoir which I am constructing in the neighbourhood of Sheffield; but still, even that would not have prevented the catastrophe.

217. Mr. *Ferrand.*] The bursting of the Bradfield Reservoir was an exceptional instance of a reservoir bursting?—Quite exceptional. Many reservoirs have bursted, but the particular cause in operation there was singularly exceptional.

218. When a reservoir is likely to burst, are there appearances of weakness or danger for three or four hours?—Generally for that time, or a longer time. In most cases they happen from two causes; either that the reservoir is leaky, which is in itself the source, in most instances, of very serious danger, or that the means for drawing off the water at the top, in case of flood, are not sufficient for the purpose, and therefore the water in the reservoir gets too high, and goes over the embankment.

219. Under these circumstances, would it not be well to have a bye-wash from the head of the reservoir to stop the flood-water from going in, and to let off the waste-pipe at the bottom, and more rapidly empty the reservoir?—It is quite immaterial for that purpose where the bye-wash is, whether it comes from the head of the reservoir, or whether it comes from the lower part of the reservoir; but there ought to be a bye-wash, and a large one.

220. If there were a bye-wash at the head of the reservoir, so as to carry off the water and prevent any water entering it in heavy falls of rain, you could empty the reservoirs much more quickly by the waste-pipe?—Yes; but still the pipes, I believe, in cases to which I am alluding, cases of imminent danger, could never be made large enough to be useful.

221. I am talking of danger at three or four days' warning?—In that time, I think, in nearly all the cases, we can reduce the height of the water sufficiently to prevent the danger.

222. What is the smallest size of reservoir, and the least amount of water, to which you would apply a Government Inspection Bill?—That is a matter which would require some little consideration,

sideration, because it involves the nature of the reservoir. In the case of Holmfirth, the reservoir was a small one, but it was exceedingly deep; and when that volume of water was discharged from so great a height, instantly it produced all those effects which you so well know. If that small quantity of water had been impounded in a shallow reservoir, and had run off gradually, it would not at all have been in danger; and therefore it would require some consideration before I could answer the question. I am perfectly willing to give an answer to it, if time be allowed me. I was rather suggesting that some exception should be made having reference to what are called "service reservoirs" and "arched tanks," of which there are a great many about London in use by the Water Companies, which probably it would not be necessary to bring within the scope of such a power as this.

223. Is there a danger if springs are rising from the ground where the embankment is to be placed?—It is very dangerous indeed. There are two cases of springs rising, one within the puddle wall and the other without the puddle wall. With regard to springs within side the puddle wall, if the puddle wall can be taken down sufficiently low to get to a perfectly water-tight stratum, the spring within is not at all injurious. If the spring be without the puddle wall, and be left running over the seat of the embankment, it is very dangerous. In those cases it ought to be piped off, and other proper precautions ought to be taken to prevent mischief.

224. Do not contractors often make their embankments on springs without piping them off, and regardless of all danger?—I have known such things to be done, and a good deal of trouble has resulted.

225. Would it not be advisable, under such circumstances, that a Government inspector should look over the ground, ascertain whether there were any springs, and see that they were properly piped away during the time the embankment was being made?—I do not think that the Government inspector could do any good in that way. That ought to be the duty of the engineer; and the engineer would, I think, in all cases see that done.

226. Is it not the fact that engineers have allowed these springs to be left under the embankment without being piped away?—I have not known the fact of springs having been left by engineers under an embankment; but I am aware that leakage of the water, which has appeared in the shape of springs, has been found under embankments. But with regard to outer springs, that is to say water issuing along its natural channels in the earth, and proceeding originally from rains, I should think that no engineer has allowed such a thing to exist.

227. Is it not usual for companies or corporations to bind their contractors that the embankment shall be quite water-tight?—It is.

228. And to maintain the embankments water-tight during the period of a year or a longer time?—Yes.

229. How long should a reservoir be full, that it may be properly tested before it is certified?—In my own case (and I think that is very general now), I always have them a twelvemonth, and that is put into my specifications, and has been for many years.

230. Do you think that it is requisite to have them properly tested for a length of time for the security of life and property?—Yes; but I think the first manifestation, in a case of imminent danger, will be made in a very few days.

231. Do you think that a reservoir with considerable leakage in it, should be certified as secure?—Certainly not, unless the leakage proceeds through the natural fissures of rock; if it proceeds from the natural fissures of rock, it will do no harm; but if it proceeds, through the reservoir, from any moveable material, it will get from bad to worse, and at last the reservoir will probably be destroyed.

232. Therefore, whenever there is a leakage of that description, do you think it is improper to have it certified as secure and safe?—Certainly.

233. Was the Bradfield Reservoir certified when the accident occurred?—No, there was no obligation in that case to certify; there was no statutory obligation that I am aware of, in the case of Bradfield.

234. Not in their Act of Parliament?—No; it is not at all usual; there are a few cases in which clauses of the kind to which you refer have been inserted in Acts of Parliament relating to waterworks and reservoirs, but it is not in any manner general.

235. Do you consider that two magistrates who are unacquainted with engineering are fit and proper persons, or qualified to certify that a reservoir is complete and secure?—No, I do not think that is a good tribunal; in case of dispute I think that a special jury of disinterested persons ought to be summoned, somewhat in the same way that is adopted in the case of the acquisition of property by compulsion under the Lands Clauses Act; the jury should be a special one.

236. Have you lately inspected the Doe Park Reservoir belonging to the Bradford Corporation?—I have.

237. Are you aware that that reservoir has been certified as secure and complete?—I do not know as to the word "security;" I think that does not occur in the clause under which the certificate was given.

238. Are you aware that Mr. Bateman declared that the reservoir was complete, and that he gave evidence that it was perfectly secure?—I am aware that he gave evidence that it was complete, but I think he had some doubt as to whether it was perfectly secure, because he recommended that it should continue to be carefully watched; I think that was as near as possible his expression.

239. Are you aware that reservoir has been certified?—I am aware of it.

240. By five magistrates?—I do not know the number of magistrates.

241. Are you aware that at the time that reservoir was certified as complete, it had a leakage from different parts of the embankment, amounting to about 300,000 gallons of water in 24 hours?—I do not know that.

242. Do you believe that a Government inspector would have allowed that reservoir to be certified as secure, if he had had the power of inspecting it, and giving his evidence upon it?—I think not.

243. Then is it your opinion that before a reservoir is certified, it should be inspected by a Government inspector, or that some controlling power should be authorised by Government?—Yes; I think that is wholly unobjectionable. I think

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think it is a thing that may be done, whether by a Government inspector or otherwise. The thing itself suggested may be done with advantage.

244. Do not contractors often fail in performing the work they have undertaken, on account of their having taken the contract at too low a price?—Many contractors, and men of small means especially, have an adverse interest; and when you find they have taken a contract upon which in the practical operations they are losing money, you cannot by any means make them do their work properly. But with regard to men of large means, men who can afford to lose money, I cannot say that is the case, because they look to their reputation.

245. Do not you think it would be desirable for the Government inspector to insist upon a contractor being engaged to perform the works who is capable of completing them with security to life and property?—Yes, if such a thing could be done; but I do not see the means of any Government inspector exercising a sound judgment on such a subject; I think that would involve the Government in more responsibility than anything else.

246. Do you, then, consider that a contractor should be allowed to make an embankment who is incompetent, from want of means, to perform the works well, wherein there is a probability, when that reservoir is completed, that a great amount of property, as well as a large number of lives, may be in jeopardy?—I think he ought not to be allowed; but I do not see any means of preventing it; that involves many moral considerations, which it is impossible, I am sure, to work out into any legislative enactment; many persons represent themselves to be exceedingly competent, and even produce very good sureties, and after all they fail.

247. In making a reservoir perfectly safe, do not you consider that expense should be a secondary question?—Quite a secondary question; but it should not be thrown out of consideration.

248. You have alluded to the difficulty of finding a competent Government Inspector of Reservoirs; do not you think that the Government might meet with a competent and eminent engineer for that office?—Yes, but I do not know that he would be competent to judge wisely of all the different cases that came before him; I think I have had as much experience of reservoir making as most people; and yet I very much doubt whether, if I were myself to become inspector, my decrees would be accepted by other members of the profession.

249. You would have to report to the Government, and then the interference would rest with them?—Yes; this would happen, the Government would feel obliged to support me as their officer; they cannot judge for themselves; there is no Secretary of State who could hear the case, and form an independent opinion whether I was right or wrong, and therefore he must take my judgement, or I must go out of office.

250. Do you consider that these reservoirs could not be made in larger number, and containing a less quantity of water?—In general, I think not, and I will give my reasons. Suppose a reservoir is to be made, say 60 feet deep, and it should be suggested that that reservoir would be very much safer if it could be made 30 feet deep, the result of that would be that a reservoir 30 feet deep would only hold one-eighth the quantity of water; the capacity in almost all cases is very nearly as the cube of the depth, consequently you would want eight such reservoirs; now the whole country probably would not afford sites for eight such reservoirs. There is the difficulty, and the difficulty (if I may extend my answer) is increasing, because we are either having less rainfall, or collecting less water, or something is happening which requires us to make our reservoirs very much larger than they were made formerly; and the consequence is, again, that if we were to adopt the system of making very shallow reservoirs, we should never be able to find sites for them, because we must have increased capacity; for instance, there are very few cases in which, with regard to waterworks, we can now be sure of giving a town a supply, unless the reservoir holds 160 days' supply; again, the wants of towns are greatly increasing. Since the introduction of the Public Health Act, and the water-closet system, it is quite common for towns to consume from 25 to 30, or from 40 to 50 gallons per head per diem; taking, therefore, a town of only 100,000 inhabitants, you want 3,000,000 gallons per day, and if you multiply that by 160, it brings it up to 480,000,000 gallons of water to be impounded in a reservoir. The wants of towns are enormous now. I quite agree with the Honourable Member who has asked me this question, that it would be a very desirable thing to do, if it were possible. All water engineers would like to make reservoirs with low embankments, but we cannot find the sites for the purpose in order to get the capacity.

251. You alluded to the Holmfirth Reservoir valves having been stopped up with rack, I think?—Yes; those valves were immoveable at the time of the accident, and had been so some time previously.

252. Is it your opinion that reservoirs which have those valves should be constantly cleaned out, so as to prevent any rack or refuse stopping them up?—I think the valves ought to be protected by grating, or other analogous means, so that it should be impossible for them to be stopped up.

253. Even if they are protected with grating, could not the sludge and rack cover up that grating, and stop it?—No; the pressure in these reservoirs is so great, that it crushes up and drives away anything of that kind in a moment; there is no danger of stopping up from a cause of that kind.

254. Would that be the case with tree-roots?—Tree-roots would be stopped by the grating. Tree-roots would block up the valves undoubtedly, if they were allowed to approach the valves; but there ought always to be a large grating in front of those valves, and sometimes at a considerable distance.

255. Is that always the case?—It is always the case in my works, and I imagine in most other works.

256. If it is not always the case in other works, and there is any danger to the public from those valves being stopped, is it not very desirable that the Government Inspector should annually see the state of those reservoirs, and report to the Board of Trade if he finds anything insecure or improper?—I have urged nothing against periodical inspection, either by the Government, or any other authority; I think it may conduce to considerable good, and it may also have the effect of allaying apprehensions which may arise in the public mind.

257. *Chairman.*]

257. *Chairman.*] You have suggested that the new reservoir should be filled by degrees?—Yes.

258. And time taken to ascertain in each particular stage of filling the reservoir, whether there was any leakage?—Yes.

259. Can you say whether that was done in the Bradfield Reservoir?—It was practically done; it might not have been systematically done in the manner I am now suggesting, but it was really and truly done in this way: I think it was in the month of July that a considerable flood came, and that flood filled the reservoir up some 40 or 50 feet deep; no large quantity of rain coming afterwards, there the water remained a considerable time; there was no leakage; afterwards there were rain-falls to various amounts, which increased the depth of water in the reservoir; still there was no leakage, and the reservoir was getting tolerably full, when, I think, in the latter end of February or the beginning of March, there came another very considerable rain-fall which nearly filled the reservoir; and at the same moment the water got into the ground, as is very common after the winter months, when the ground is pretty well soaked by rains; this large additional quantity of water got into the ground on either side, and hence the catastrophe without any indication of leakage. But that is so exceptional a case that I think it can scarcely be quoted with reference to an object of this kind.

260. In fact you think that the public need not be alarmed at that extraordinary event, because it is not likely to occur again?—No; I think it will not occur in that manner. The bursting of a reservoir is a thing which is likely to occur again, but not from that particular cause. What I desire to convey is this: I assume that the Government inspector had come down there on the 1st of March. He would have inquired whether there was any leakage; he would have found there was none; he would have looked at the embankment; he would have found it perfectly straight and sound in all respects; and, if it had been his duty to do so, imposed by a Bill of this kind, he would have given his certificate; nevertheless, a fortnight afterwards the reservoir would have burst. That was a case in which inspection would unquestionably have failed. But I distinctly wish to put it, that that particular case does not militate against the theory of having large reservoirs inspected at proper intervals.

261. Mr. *Smollett.*] By a Government inspector?—By any proper officer; I do not profess to say whether by a Government officer or otherwise.

Martis, 23° *die Maii*, 1865.

MEMBERS PRESENT:

Mr. Beecroft.	Mr. Kendall.
Mr. Ferrand.	Sir John Ogilvy.
Mr. William Edward Forster.	Mr. Roebuck.
Lord Richard Grosvenor.	Mr. Smollett.
Mr. Hibbert.	Mr. John Tollemache.

JOHN ARTHUR ROEBUCK, Esq., IN THE CHAIR.

SIR ARTHUR COTTON, called in; and Examined.

Sir *A. Cotton.*

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262. *Chairman.*] YOU are an Officer in the Army of the East India Company?—Yes.

263. What corps do you belong to?—The Madras Engineers.

264. You had great experience in the construction of various works whilst you were an engineer of the East India Company?—Yes.

265. Amongst those works, were there tanks or embankments to store up water?—I had charge of many thousands of tanks.

266. Is there any peculiar mode of making a tank in India?—The Government have not constructed any large tanks, at least, very few indeed, only one or two large tanks; there are perhaps 100,000 native tanks in the Peninsula, and I had charge of many thousands of them, all built by the natives.

267. Built before the English rule began?—Yes.

268. And they have lasted many hundred years?—Yes.

269. Is there any mode of constructing those tanks which is peculiar as compared with our mode?—The great difference is, the entire simplicity with which they are built; there is no complication in the embankment.

270. Will you explain what you mean?—There is nothing but a heap of earth thrown up, without any puddle bank, or anything else whatever.

271. Is that heap of earth beaten down?—No, it is not beaten, or anything; it is carried by men on their heads.

272. Is the embankment very broad?—It is broad, according to the depth of the tank; it is not excessively broad.

273. Do you consider that making use of puddling is an increased precaution?—I wish to keep separate from my opinion, the fact that there are probably a hundred thousand tanks in which no such thing as a puddle bank was thought of, and they have stood for hundreds of years.

274. That is a matter of fact?—That is a fact, and I wish to keep the fact separate from my opinion.

275. Do you think the making of the puddling, as was described in your hearing the other day by Mr. Hawksley, an increased precaution which in this country has been taken for the storage of water?—No; I think it is more likely to be an increased danger. I have built embankments, and I have repaired old embankments; but I have never built a large embankment.

276. Will you explain why you think it may possibly be an increased danger?—If you make an embankment of homogeneous earth thrown in in heaps, it sinks equally, and it is perfectly water tight. I have had the charge of thousands of tanks, and I never knew the water come through one of them; but if you complicate it by putting in masonry, or a solid puddled bank in the middle, it sinks unequally; and the probability seems to be that the wall will be cracked and broken, and that there will not be an uniform sinking, and that it is more likely, therefore, to leave passages for water than to stop them.

277. Did you visit the Bradfield Waterworks after the accident?—Yes; I saw the embankment.

278. Are you enabled to form any opinion as to the making of that embankment?—You mean as to the mode of construction?

279. Yes?—I think it was complicated in this way, which I should not have done, with a puddle bank.

280. Is that the only fault about it?—It was a difficult site, I have no doubt, from the state of the strata, and would have required very thorough examination indeed to establish a perfectly safe bank there.

281. From what you saw, do you suppose that examination was not made?—I do not know.

282. Supposing, for example, you had been called upon to make a bank of that sort, what would you have done?—I should have required very careful examination of the site below the level of the ground; I should have sunk shafts and run off the water, as far as possible, to ascertain what there was below the embankment. That would have been the principal thing done.

283. Are you at all aware whether there were springs under the embankment?—I understood so; and I should conclude there would be, from the nature of the strata.

284. That there were springs under the embankment?—Yes.

285. Would not they have increased the danger

danger arising from the embankment?—Very much.

286. Have you ever expressed any opinion about this?—I did not give the site that examination which it would require to ascertain what was the cause of the failure; I merely looked at it. It would have required a good deal of examination to have satisfied myself about the cause of it.

287. In India, have you ever seen tanks in a similar situation where there was a storing up of water in a natural valley?—Yes.

288. And where the sites were as dangerous for the construction of the embankment as in that case?—I do not think I ever saw an embankment on so suspicious a site, as respects the strata.

289. From the experience you have had, would you have felt doubt as to the wisdom of making an embankment in that place?—I could not have told without thorough examination of the site by sinking shafts, and so on.

290. Can you at all tell, from your knowledge of embankments in India, the different periods at which they were built?—We have the dates of of many of them.

291. Were they built under the Mahomedan power?—They were probably almost all done under the Hindoo power.

292. Speaking generally, do you think there is any very great difference in the making of embankments for storing up water?—I think that in this country there should be extreme caution in making reservoirs where there is a vast population beneath them.

293. Do you think the climate of this country at all renders it more difficult to make an embankment here than in India?—No.

294. The damp and the wet?—No; I do not think there is any difference in that respect.

295. Have you had any experience either from history or otherwise, in the bursting of tanks in Hindostan?—Many tanks have burst that were under my charge in India, but never one by the water finding its way through an embankment, except in one or two instances, water has found its way round the end of it, which I will speak of afterwards. It was invariably owing to tremendous floods overtopping the embankment, and cutting through it.

296. A vast accession of water ran over the embankment?—Prodigious floods, entirely filling the whole valley, going over the top of the embankment, notwithstanding the waste weir, and cutting through. I have alluded to two exceptions, in which the embankment gave way, not from the water overtopping, but from the water finding its way through the natural ground outside the embankment.

297. Not from the embankment?—Not from the embankment; I never knew the water to come through an embankment without any puddle wall.

298. Were those two exceptions ancient or modern tanks?—They were both modern.

299. What do you call "modern"?—One was an embankment built by the English Government about 40 feet high; it had only been standing a few years when it burst, and the other burst within a few months after it was made.

300. By whom was that built?—It was built by me.

301. So that your knowledge of the bursting of embankments from water percolating under the embankments, or through the embankments, has been in cases in which they were made entirely by British officers?—I have never known the water come through an embankment, but the water entirely found its way through the natural ground on which the embankment rested on the sides.

302. Did you ever find such an accident happen in an embankment made by the natives?—No; I think all the accidents that I have known in the old native tanks occurred from the water going over them, without exception.

303. Would not that suggest to you that the old engineers understood the matter rather better than modern engineers?—I do not think that has anything to do with the question. These tanks were built on sites where the water had found its way through the natural ground. All the native embankments are built in the same way, resting on the natural ground, without any precautions being taken.

304. Do they never dig what is called a "puddle trench"?—Never.

305. They merely put the earth on the surface of the ground?—Entirely.

306. Making a puddle trench, you do not think is an increased precaution?—I say so in an embankment; I am not speaking of what is done below the bed of the natural reservoir.

307. You think, then, that putting a puddle below the surface of the ground is an increased precaution?—It may be an absolute necessity, I think, either masonry or puddle.

308. Have you ever known masonry put by the Hindoo constructors of tanks?—Never.

309. And, in fact, they never take any such precautions?—None.

310. And your experience does not tell you that any one of their embankments have broken down in consequence of water percolating through them, or under them?—Never; and I have had thousands under my charge. Scores of them have burst from the water going over them, but not through them. I may mention some particulars about those two cases to which I have alluded: one was across a valley; it rested on two steep hills of clay; and after it had burst, in reforming it they found immense excavations out of the natural clay, which the water creeping through had worked out until it made quite a cave in the side of the hill; the earth fell in from above, and the water cut round the end of the bank.

311. Have you any experience of any embankment placed in a similar geological position to the Bradfield embankment?—No; I never had to deal with a site which I should consider so difficult a site as that.

312. So that the fact of the accident is not to you a matter of wonder?—I have not satisfied myself as to the cause of it, but it was a site that I should have considered very suspicious, and required very great caution.

313. Do you still hold that opinion of the site as it now stands?—Yes.

314. And therefore you consider that it would be dangerous to put an embankment there again?—I would hardly say that I should consider it dangerous; but I would say, that I consider it was absolutely essential that there should have been a very careful and thorough examination of it, and that there should have been thorough satisfaction obtained as to the nature of the precautions to be taken.

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315. Did you hear the whole of Mr. Hawksley's evidence?—I think I did.

316. You heard him explain the precautions that had been taken before making that embankment?—Yes.

317. Did you think that explanation satisfactory as to its sufficiency?—No.

318. Will you state why you think it insufficient?—I think it should not have been trusted to any one local engineer. I consider that inspecting engineers are absolutely essential for all works, but more especially for waterworks. I have been 45 years in India, and during most of that time employed about water, and my experience of it has increased my respect for it every year, and I think that too great precautions cannot be taken.

319. Then you think that an inspector sent by Government to inspect the embankment during its construction, would be a proper precaution to to take?—Absolutely essential. I do not think it right for a moment to build an embankment on such a place as that without the Government taking cognizance of it from the very first, or without their deciding whether an embankment should be allowed to be built there at all.

320. And you say that in the interest of the safety of the inhabitants?—Yes.

321. Do you foresee any dangerous consequences from the appointment of an inspector?—Like everything else, evils may arise out of it; but I consider the principle of inspection an essential principle. Of course improper men may be appointed, but that may be said of everything.

322. You heard Mr. Hawksley's objections to inspection?—Yes.

323. Do you concur with him?—Not at all.

324. In such a case would you consider two heads better than one?—Yes. An inspector has a far greater range of experience than any local engineer can have; his inspecting duties take him over a great range of country, bring him into contact with a great variety of persons, and thus give him an immense advantage in inspecting a site.

325. In point of fact, you think that an inspector is likely to have more knowledge than a local man, or any man appointed to make the embankment?—Yes. In this case, a mistake was made by which, in consequence of their not observing it, the embankment failed. Greater experience would probably have pointed out that mistake beforehand and have prevented it. I consider a system of inspection an universal principle, and I consider, above all things, that it is applicable to reservoirs.

326. Do you think that inspection would be aided by geological information?—Yes.

327. And that an inspector ought to be a geologist as well as a civil engineer?—I will not say that. If he had any considerable knowledge of geology it might be well. He might call in a geologist's opinion on a particular site.

328. So that you think Government inspection might lead to the employment of geological knowledge?—Yes.

329. Would you think that an additional precaution?—Yes.

330. So that, in fact, your opinion may be summed up by saying that you think it is absolutely requisite for the safety of the inhabitants that there should be an inspection over those great reservoirs?—Certainly, from the very first; and even as to the question whether they should be built at all.

331. Have you anything more to add?—I wanted to mention the particulars of the other reservoir which I stated had given way, because it seems to me to throw light on the subject. It was in a Delta, in the alluvial country. I had to throw up an embankment, and stop the mouth of a river in order to get navigation to carry materials to a work; there was no time to be lost; we raised the embankment as quickly as we could; the earth was taken from the spot. So soon as ever it was high enough, 17 feet, I allowed the water to stand against it. As the embankment sank, I kept people employed night and day in raising it. Not a drop of water ever went through that embankment, although it had not been built a day when the water was allowed to rest against it.

332. What size was the area of the water that laid against it?—It was the end of a narrow channel, many miles in length.

333. You say in the Delta; what river?—In the Godavery; the very earth of which we composed the bank at the sides, the water found its way through, and got round the embankment, soaked the earth from the sides until they melted down, and left the end of the embankment exposed, and so it was destroyed. The very earth which in its natural state was lying in layers, the water found its way through. It was perfectly water tight when we threw it up homogeneously.

334. Can you give any explanation of the cause of the one being safe and the other being unsafe?—That the natural earth or shale lies in layers, and the water finds its way through; but if it is thrown up in small masses, it becomes perfectly tight.

335. Mr. *Kendall.*] Does not that depend very much on the nature of the stuff?—Entirely.

336. And there must have been a great deal of clay in that stuff?—It was alluvial earth.

337. But it would get very close together?—It would pack quite close.

338. Suppose there was decomposed granite?—Then the embankment ought not to be made of it.

339. That is to say, the inside of the embankment ought not to be made of it?—I do not care what the mass of the embankment is made of, if the inside is water-tight.

340. You heard Mr. Hawksley speak of the landslip near the Bradfield Reservoir, that it was foreseen and was avoided, but that there was something which was not foreseen, namely, that a landslip pressed against some shale, that the shale pressed against the puddling part, and broke it down, and then destruction followed; do you agree with him on that point?—I do not know enough about the site to be able to answer that question.

341. You think it not at all improbable that had an inspector been sent down to Bradfield, all the evils that arose might have been avoided?—That it is almost certain, if there had been an experienced inspector.

342. You think it most likely that an inspector from his being here, and there, and everywhere, and from his varied knowledge, would have detected that which a local man, however clever, would not detect?—Yes; he would either detect it, or he would say, "This is so dangerous a site that I cannot recommend the reservoir to be made here."

343. And,

343. And, on those grounds, you disagree entirely with Mr. Hawksley as to the value of a Government inspector?—Entirely.

344. Mr. *J. Tollemache.*] Did you see any other place near there which you should have preferred as a site for an embankment?—I did not examine the country sufficiently to enable me to answer that question.

345. In those embankments which you have formed, and seen formed in India, there were no sluices?—The low embankments have many sluices in them, because they are 10 or 12 miles long.

346. And water is let off through those sluices?—It is let off for the purpose of irrigation.

347. Are the sluices at the bottom or at the side?—Built of masonry in the solid ground.

348. Do you think the sluices in the Bradfield Embankment were placed in a proper position?—No; I think they were placed in the only position where they ought not to have been placed.

349. Do you think, from the way they were placed, they were likely to cause weakness in the embankment?—I think there is great danger connected with carrying the water through an artificial embankment. I would make the outlet for the water through the solid ground, through the side of the tank, and not through the embankment. That is a wanton danger, for no purpose at all.

350. In India, is that danger of carrying sluices through artificial embankments known and avoided?—The precaution which is taken there is, to build solid masonry sluices, the foundations of which are made deep in the natural ground.

351. And not in the embankment itself?—The embankment rests on a masonry arch over the sluice. They never lay a single pipe through the bank on which the embankment rests.

352. You think that the sluices were in a bad situation in the Bradfield embankment?—Certainly.

353. In India, are iron pipes ever made use of?—Never.

354. If iron pipes were used there, do you think they would be applied in that way?—If they had iron pipes, and used them, they would put them in a masonry arch.

355. Were the iron pipes to this Bradfield embankment surrounded by masonry?—Simply laid in the ground.

356. You saw that yourself?—Yes.

357. Do you believe that might be a source of weakness?—It was running a risk for which there was no occasion whatever. I may mention that I think an inspector, for instance, should have certain rules, as standing rules, laid down upon the construction of a tank, which should never be evaded; one is, that there should be no sluice through the embankment.

358. You were present when Mr. Hawksley was asked his opinion on the manner in which an embankment was constructed by another engineer, and he felt a delicacy in expressing an opinion on the work of another engineer; do you think that is an additional reason why a Government inspector should be appointed who would stand upon no such ceremony?—Certainly; and he ought to be a man who can be compelled to give his opinion freely.

359. And who would stand upon no ceremony?—Yes.

360. And would not think of the interest of the company at all, compared with the safety of people?—Exactly; that is one main reason why inspectors are necessary.

361. Of course, an engineer who is employed by a company has to look at the cost?—Yes; he has to defend his friend, or avoid saying anything against a man to whom he is opposed; and all sorts of things.

362. Mr. *Beecroft.*] In the general mode of constructing tanks in India, advantage is taken of natural valleys?—Yes.

363. There are heavy rains in India?—Yes.

364. How do the settlements from continuous rains affect an embankment?—They never affect it at all, except the flood is so violent as to fill the whole valley and overtop the embankment.

365. Then you allow a mode of escape?—We have great escapes.

366. What is the average depth of water in the tanks?—They are of all depths; from 3 yards to 20 yards.

367. Is 20 yards about the highest?—The highest reservoir that I ever saw was 54 feet; I believe there are one or two higher.

368. What is the width of the native embankments?—They make them very various; perhaps from 3 yards to 30 yards at the top.

369. According to the depth?—Partly according to the depth.

370. What is the inclination of the slope of the embankment?—The inside slope, perhaps, from 2 to 3 to 1.

371. What is the general character of the strata?—There is almost every variety in the country; they are made in the hill country, and they are made in the flat country, and in the Delta, and everywhere.

372. Mr. *W. E. Forster.*] What intervention does the Government of India take with regard to reservoirs?—Nothing particular; nothing but the ordinary organisation of the Public Works Department; they have no inspector of reservoirs, except the ordinary head of the division, the district engineer.

373. Are reservoirs made by private companies in India?—They have not been in Madras; there is one built at Bombay.

374. Then, generally speaking, they are made by the Government?—The Government have made very few; they have made hardly any large ones at all.

375. Does the Government take any steps to keep reservoirs in repair?—Yes; they are all under the charge of an officer of the Public Works Department.

376. Is the officer of the Public Works Department responsible for their being kept safe?—Yes.

377. How frequently would a large reservoir be visited by the Government officer?—An important reservoir several times in a year, probably.

378. Have you known any case of a large reservoir bursting?—Yes; there have been several cases.

379. Much loss of life?—A little loss of life; there was great loss of property.

380. What is the most destructive case you have known?—I will relate one case; there is a reservoir in the South Arcot district, to the south of Madras; the embankment is 12 miles long, and the tank about 25 miles in circumference, and about four yards deep in the deepest

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part; it was empty at three o'clock in the morning; the water went over the whole length of the embankment about nine o'clock, and breached it in 13 places; it held 100,000,000 cubic yards of water before the water went over the embankment; there were immense escapes.

381. Did it all go?—The embankment was cut in 13 places.

382. And there was great destruction of property?—There was great destruction of property.

383. Did that embankment give way underneath and by the sides, or was it from the water overtopping it?—Merely from the water overtopping it.

384. Under what inspection had that been?—It was not in my charge at the time; I was the engineer of the division some time after the accident.

385. Had you seen it shortly before?—Yes, I frequently saw it. I was in some confusion when I answered the two last questions; I ought to have said I had not seen it before the accident.

386. I suppose it was an old reservoir?—Very old: it was built in the second century.

387. As the Government have not built many reservoirs, probably no rules have been laid down by the Board of Works Department with regard to reservoirs?—No.

388. You think that certain rules might be laid down?—Certain rules.

389. Of course, if they could be laid down, they would have the advantage of being certain rules, and would avoid the disadvantage of the Government making itself responsible by previous inspection for any discretion?—To a certain extent; there must be orders given with respect to each individual site, but there are certain general precautions which would be of almost universal application.

390. No evidence could possibly be more valuable to this Committee than rules suggested by a witness of your experience; one rule that you would suggest is, that no sluices should be made through an artificial embankment?—Yes, that is quite clear; there is no object in making them there

391. Will you suggest any rule with regard to the height at which the water should be allowed to rise, before it was let off, beneath the top of the reservoir?—Yes, but that would vary with the site.

392. Could you give to the Committee an idea of the principle on which you would proportion that?—In some exposed situations, where there is a long straight reach of the reservoir, a storm of wind coming down may raise very high waves; but if it is in a sheltered spot, or there is a turn in the reservoir, where there is no great extent of water above the embankment, then there need not be so great height of bank above the water level.

393. I have heard it stated that it is the custom in India not to make reservoirs with a view of holding water, except up to a level considerably below the top of the embankment?—That is the rule. Many of them are allowed to stand a great deal too high.

394. Do you think that, generally speaking, the level at which reservoirs are kept in India is lower or higher than the level at which they are generally kept in England?—I should think much about the same; I do not think there is much difference.

395. I suppose you would not be prepared with any exact rules for the depth?—No.

396. Do you think that a principle might be sufficiently clearly ascertained, so that a Government inspector might be able, according to the size of the reservoir and the situation, to determine the level?—Yes.

397. Have you any rule to suggest with regard to the proportion of weight of water to the thickness of the embankment?—If the earthen embankment is made with the necessary slopes, it must be abundantly strong.

398. *Chairman.*] By "necessary slopes," do you mean the slope at which the ground falls naturally?—The inner slope ought to be at least three to one, and the outer slope not less than two to one; and that would give ample strength.

399. Mr. *W. E. Forster.*] Is the cost of erecting reservoirs in India very much less than in this country?—I suppose so.

400. Is there any other rule which you can suggest besides the three which you have alluded to?—I would absolutely insist on a certain size of waste weirs, so as to be able to allow a certain quantity of water to be let off at a time.

401. You heard Mr. Hawksley's evidence as to the impossibility of letting off the water, except in a very long space of time; do you agree with that evidence?—Not at all; he was asked whether it could be let off, and he said that it would take 10 days to empty the reservoir. The question is not as to emptying the reservoir, but letting off, perhaps, one single yard of water which is the cause of danger.

402. In the case of the Bradfield reservoir, if the water could have been let down a couple of yards, do you think there would have been any danger?—Very likely not; it is exceedingly probable that if the pipes had been capacious, and they had opened the weir when the crack appeared at eight o'clock, no accident would have occurred; that is one most clear precaution.

403. Can you define more clearly any rule you would make with regard to the size of the waste pipe?—I would insist on a reservoir with a drainage basin of certain dimensions having a certain waste weir; but you must keep perfectly distinct the water carried off by the waste weir, and the water carried off for use by the pipe; I would have rules for both.

404. For the bye-wash?—For the bye-wash, as well as for the service sluice. I would require that the service sluice should be of such size as would let off a certain number of cubic yards in an hour, according to the site and size of the reservoir.

405. Then you do not think it impossible, in almost all the reservoirs in England, to have bye-washes made of sufficient size and sufficient number, so that in case of danger from a sudden flood the water might very quickly be brought down to a safe level?—By washes and service sluices; I should think it was a thousand to one against any accident occurring, if you had that precaution.

406. After inspecting the Bradfield reservoir, have you made up your mind as to what bye-washes would have been necessary there for that purpose?—It would require calculation, and so on. The pipes were of iron; they were carried through the embankment itself; they were carried through

through the worst part of the embankment, that is, the middle of it; they were shut at the outer end, and there were not the means of shutting at the inner end; there was every possible objection to that mode of doing it, and every risk was run that could be run.

407. Was there or not almost a certainty that at some time or another those iron pipes would get out of repair?—Yes; they might decay.

408. Were there any means by which they might be constantly inspected?—No.

409. Then it was almost a question of time whether those pipes would be incapable to carry the water?—That is one objection to pipes.

410. Have you any other suggestion to make?—The service sluices should be closed at the inner end and not at the outer end, and they should be made capacious sluices that people can go inside of.

411. Is not that generally the case now?—I saw one the other day in Ireland perfectly well constructed so far; still it was made in the embankment instead of being made in the solid ground.

412. Are the bye-washes often opened in India?—Constantly; the banks would be carried away every year if the bye-washes were not to be opened; they are made very capacious, eight or nine feet deep and open, perhaps 200 yards in length.

413. Are these bye-washes in the nature of trenches?—These are open weirs.

414. Is it common for a flood to tear away the masonry in those open weirs?—No: that is an accident that seldom occurs.

415. Are they made in steps or in slopes?—Sometimes with stone steps, and sometimes with a perpendicular fall.

416. Have you any opinion as to the advantage of a slope over steps?—We always make them with steps; I do not think we ever make them with a slope exactly. The question with us is merely whether they should be made in steps, or with a perpendicular fall.

417. I understood you to say that you do not recommend that the service pipes should be used for any purpose except conveying the water for use, and that every mode of letting off the surplus water should be outside the embankment?—I consider that the service pipes should be made sufficiently capacious to let off a large body of water if required; not pipes, but sluices; I would make masonry sluices.

418. You would recommend that no sluice should be made for the purpose of carrying off the surplus water except outside the embankment?—Yes; the sluices that are used for service should be made so as to let water escape more rapidly if required.

419. Then are the Committee to understand that you suggest that a sluice for letting off water for use should not be made through the embankment?—None; I think that an artificial embankment should never be trifled with in that way; there is no object in it.

420. Mr. *Hibbert.*] I understand that the three modes in which you would get rid of the water are, by forming a bye-wash, then a service sluice, and then an escape sluice?—The last two are included in one, but made sufficiently capacious to let off a good body of water if necessary.

421. Would it be desirable to have an additional escape sluice to be opened from time to time?—It might be done.

422. You say that you would not place your service sluice in the centre of the embankment where would you place it?—In the solid ground at the side of the embankment; I would cut a trench in the solid ground and put it there.

423. Therefore, you would not be able to get rid of the whole volume of water in the tank at any time if you required it?—If you chose, you could cut it down to the depth of the bottom of the reservoir; but in the solid ground; but there is no object in that; in the Bradfield reservoir, if they had left 30 feet of water in it, it would only have lost them the use of three or four per cent. of all the water in the tank, because in the last 20 or 30 feet there is so very little water.

424. How would you make your service sluice; would you make it of masonry?—A solid masonry sluice with deep foundations, and an arch, and the water let in at the upper end, and the water never let in in such quantities as to fill the whole of the sluice; so that there should never be any pressure of water inside the service escape.

425. You mentioned one reservoir where the water had found its way through the natural ground; was that by finding its way under the embankment?—No, through the side.

426. Had it been made under your own inspection?—No.

427. That was a modern work?—Yes, only built two or three years.

428. Do you know whether the ground had been examined before the embankment was made?—No, there was no suspicion of it at all; it seemed perfectly solid. It was homogeneous clay, and there was no suspicion of it. But that case and the other case which I mentioned and gave a few particulars of, show me that the natural ground constantly lies in layers, through which the water finds its way, whereas the earth thrown up in an embankment is perfectly tight.

429. Supposing you had an inspection of the ground before the embankment was made, what course should you adopt; would you have trial holes made?—I would sink shafts in the sides and down into the bed until I was quite satisfied.

430. Supposing that the ground is in a very unsatisfactory state, what course do you adopt?—I think I should make a masonry wall up to the level of the bed of the tank.

431. From a perfectly water-tight stratum?—From a perfectly water-tight stratum.

432. You have stated four rules which might be laid down in case of an inspection of reservoirs; would you propose that the site should also be examined by an inspector before anything was done?—Yes; from what I saw of that Bradfield site, I have no doubt that there are sites in England of which, if I were an inspector, I should say that it was too great a risk to run with an immense population, and that whatever the profit, it would not be worth while to run the risk.

433. Do you know whether any of the large tanks in India are of the depth of the reservoirs in England?—No, I never heard of any so deep as that Bradfield reservoir. The highest embankment I have seen myself was 54 feet.

434. Mr. *Smollett.*] Where was it?—In the south-west of the Cuddapah district.

435. Mr. *Hibbert.*] Does not the greatest danger arise when the embankment is laid across a narrow ravine, and where you have great depth of water?—There is no particular danger.

436. Is there not greater danger than when the water is over a wider surface?—There is greater

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danger and mischief than would exist if it were spread over a wider surface, because the discharge is so sudden.

437. Not greater danger to the people?—No; in all these cases it must be understood that it entirely depends on the suddenness of it. The same quantity of water might have been discharged in six hours, probably without doing any mischief at all, and if it had been deferred one hour, perhaps there would not be one life lost; that is, if it had taken four hours to escape instead of three. So that if the reservoir could have been lowered a yard or two yards, the mischief might have been altogether prevented; that is to say, the destruction of the bank might have been gradual, and perhaps three-fourths of the water could have been carried off without any mischief at all. In dealing with floods, I constantly find it said that you have to control such a body of water; but it is the last yard or last foot that does the mischief, and you have not to control the whole of the flood.

438. You have no means of diverting the flow of water into the bank?—No, I think there is no object in that.

439. You do not make provision for it?—No; we open the waste weir. There is nothing like the danger in England from floods that we are exposed to in India.

440. What is the additional danger that you have in India?—I mentioned a tank with an embankment 12 miles long; the water was going over the whole length of it in a few hours.

441. Would an additional number of sluices in that embankment have been an advantage?—Nothing could have saved that embankment in a flood of that sort; there were immense weirs at the end of that embankment.

442. If you had inspected that ground before, would you have refused to give permission for an embankment being made in such a place?—I could not answer that question without knowing the result of careful examination; I think it is very likely that I should have said that it was too great a risk, considering the situation above a town.

443. Sir *John Ogilvy.*] You stated that a large embankment had given way which had been constructed under your direction?—No, that was a very old embankment; the one which I said gave way that I built was a small one where the water escaped through the natural ground at the side.

444. You approve of Government inspection?—Entirely.

445. What powers would you give to a Government inspector?—I would give very considerable powers to the inspector.

446. Will you describe them?—He should have great powers.

447. To call in the opinions of professional men of different kinds, engineers or geologists, and the power of ordering particular things to be done?—Certainly; an examination and borings.

448. You have stated that the old embankments in India were formed with the soil of the country carried on men's heads?—Yes.

449. And deposited in small quantities?—Yes.

450. Do you think the treading by the men, and doing it in narrow layers, had any important effect?—No; I do not think it signifies at all what the mass of the embankment is, if there is a good watertight slope on the inside. Our objection is to an embankment not being homogeneous; that is to say, there being solid masonry or solid puddle, while there is artificial earth on its side which sinks irregularly and breaks; whereas, I would have an homogeneous mass which, if it sinks, cannot leave a crack.

451. Mr. *Smollett.*] You have stated that the Government do not build many works or reservoirs in India; I presume that observation is made with reference to a very large number of native works that now exist?—Yes.

452. But Government do repair and place tanks in a proper state of order; in fact, the whole of them are Government property?—Yes.

453. They constantly build a great many?—They do not actually build them, they repair them.

454. And make them?—I have known very few built.

455. You say that there is no regular inspector of tanks in India; is there not an engineer in every district, with two or three assistants, whose duty it is, more or less, to see that all the tanks are in a good state of repair?—Yes.

456. And he ought to see them every year?—Yes, if his duties allow him to do so.

457. With regard to many of these tanks, do not they constantly burst, and are they not constantly being put into a state of repair?—Numbers of tanks burst; not every year, but in all years, when there are heavy floods.

458. Are you not aware, for instance, that along the valley in the Bellary district whole ranges of tanks, depending on each other, have given way in one night?—I do not know the district, but no doubt it is the case.

459. You have heard of that?—Yes.

460. Is it not necessary that every work should be frequently inspected, and kept in a state of repair?—Yes; and I have been trying to enforce that principle for years.

461. Do you think the Royal Military Engineers, such as the Government employ, as a rule are good civil engineers to undertake the management of reservoirs?—There are very good ones in Madras; we have had some of the first engineers in the world there.

462. They are employed almost entirely as civil engineers?—Yes.

463. That is not the case in this country with the Royal Engineers?—No.

464. Do you think that a Government inspector is likely to be a man of greater scientific experience than Mr. Hawksley?—That is a sort of leading question, as it seems to me, and I could not answer it directly; what I mean is that they should have a man quite equal to the charge as inspecting officer; a man of great experience and extensive knowledge, and so on; the question is not what he is likely to be, but what he ought to be.

465. Do you think that by that scientific man all accidents would be guarded against?—I think it would be one hundred to one against an accident ever occurring, if it was carried out with common ordinary judgment.

466. Then, is it your opinion that in India, from the great care which the Government take to employ always engineers of their own, accidents are very much guarded against?—I do not think that they are anything like sufficiently guarded against, because they neither have a sufficient number of officers nor do they allow sufficient expenditure.

467. Mr. *Ferrand.*] What length of time is consumed

consumed in India in making the largest class of embankments?—I do not know whether I could state. I have never had any very large embankment to make myself, at least for a tank. The one that I said was 40 feet deep, which gave way; I do not know how long they were making it.

468. Two or three years?—Probably not so long; most likely one year.

469. Will you describe more fully how they are made; I understood you to say they were thrown up by the spade?—Earth excavated from the bed of the tank or from the side, and put in baskets, and carried on men's and women's heads, and thrown down.

470. When the earth is thrown down, is it not also trodden into an adhesive state?—Nothing is done to it.

471. When they carry these baskets of earth, do they tread that which is previously laid on?—With their naked feet.

472. Has not that the effect of making the embankment very close and adhesive?—No; I do not think it has anything to do with it. I think it is entirely from the settling of the earth that it is made compact.

473. Do you approve of the system in England of the material for embankments being tipped out of waggons?—Yes; I see no objection to that.

474. What thickness of layer do you recommend to be laid on at once?—I do not care what is the thickness of layer. The precaution to be taken I consider is, to secure that the inner slope is good homogeneous water-tight earth.

475. So that the water cannot percolate through the bank?—Yes; so that it cannot go into the mass of the embankment.

476. That being the case, you would not allow any round stones, or boulder stones, or rubble, or loose earth of any description which is of a stony nature, to be used for the embankment?—No, not in the inner slope. In the mass of the embankment I do not care what it is.

477. Do you think it is possible to make such an embankment as that in England?—Perfectly.

478. Are you aware of any such embankment having been made?—No; but there can be no difficulty in it that I know of.

479. Are you aware of any embankment being made on that principle?—I know little about English works.

480. You have recommended that the sluices should be made much larger than they are made at present, for the purpose of suddenly letting off a reservoir with the assistance of the by-wash?—Yes.

481. Would not that extraordinary rush of water be more than the natural channel could take?—I would not make it greater than the channel would carry down without mischief.

482. Are you not aware that in the hilly district of the north of England the rain-fall is sometimes so great that the natural channel is scarcely able to take it?—I would only let off the water in certain quantities and not too quickly. That is the very object of sluices. If an embankment gives way, the mass of water comes down at once, and the mischief is done. If there had only been a delay of two or three hours, perhaps there would have been no mischief at all. I think, for instance, that at this Bradfield reservoir a capacious by-wash might have been opened, and a yard or two of water let off in an hour or two; at the same time, capacious sluices might have been opened to let off two or three yards more of water in a few hours, so that in six or eight hours it might have been lowered several yards; and the probability is, that no accident would have taken place if that had been done.

483. Under those circumstances would it require a very responsible and well-educated person to take care of such a reservoir?—Yes; and it ought to be so. Nothing surprises me so much as to see the care that is taken about railroads and so little care taken about reservoirs, which are 10 times more dangerous to construct, and 10 times more mischievous when an accident occurs.

484. Have you examined many reservoirs in Yorkshire and Lancashire?—Not lately; in former years I have seen many of the reservoirs.

485. Do you consider yourself competent to give an opinion on the management of such reservoirs without having more fully inspected them?—There are several points on which I said I was not competent to give an opinion.

486. Do you recommend that large reservoirs should be made without by-washes from the inlets?—I do not think that is of any use at all.

487. You do not recommend a by-wash from the inlet to turn off the flood water?—No; I do not think there is any use in that.

488. *Chairman.*] You think that it is a fundamental rule that there should be no tampering with the embankment itself?—Yes.

489. That all the by-washes and all the service pipes should be directed through the adjoining land, and not touch the embankment?—Yes, I consider so; and I am speaking of such reservoirs as are ordinarily made in England. In very long embankments it may be absolutely necessary to make them through the bank. I do not suppose you have any such case in England.

490. In throwing down earth does it not take a natural angle?—Yes; 45 degrees.

491. Is that sufficient for the inner slope?—No, the inner slope should be at least three to one.

492. Mr. *W. E. Forster.*] As you would not make any outlet whatever from the reservoir through the artificial embankment, would you make any rule as to the distance below the artificial embankment at which the water should be let into the natural channel?—I would not say precisely, except that it should be carried quite clear of the embankment so as to enter the river below.

493. Your great argument in favour of Government inspection is, that the Government inspector would be quite independent of all the interests that were concerned in the making of the reservoir?—That is one point.

494. And, therefore, when the Honourable Member for Dumbartonshire asked you, whether you thought a Government inspector could be obtained of more ability than Mr. Hawksley, what you meant by your answer I suppose was, that without expecting that would be the result, whoever was appointed Government inspector would have no other concern except the inspection, and would not be connected with the Company in any way?—That is one main point.

495. Comparing Government inspection in England with Government inspection in India, would there not be this difference, that the Government inspector in India would be inspecting a Government work, that is to say, a work for the maintenance of which the Government were responsible,

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responsible, whereas a Government inspector in England would be inspecting a private work?—Yes, but these points are the same for all; for instance, the inspection of railways and everything.

496. Mr. *Kendall.*] Do you think there would be any difficulty in getting the kind of man that you think able to inspect?—I think there would be some difficulty in that.

497. Mr. *W. E. Forster.*] But you do not think that is an insuperable difficulty?—No.

498. It would only be a question of money as to the remuneration which is necessary to be given to a competent man?—The difficulty would be rather to find the man.

499. Do you think that if the Government were prepared to give the money, the man could be found?—Yes. It must be understood, that of course he would be at a disadvantage for the first year or two; but such a man, if a man of the capacity, and general information, and experience that would be necessary, having the whole of the reservoirs of the kingdom under his eye, and in contact continually with all the different engineers connected with those works, he would soon have such extensive experience of every kind as would make him invaluable and superior to any ordinary engineer.

500. Do you consider that whatever arguments there are for Government inspection of railroads, they apply with the same, if not greater force, to Government inspection of reservoirs?—Much greater.

501. Mr. *Beecroft.*] Are there not many gentlemen in this country who are well qualified to fulfil that office?—Yes, there is not the least doubt of it.

502. It is merely a question of remuneration?—That is all.

503. Mr. *Hibbert.*] You said that you might in some cases build the foundation of the embankment with stone?—You must not call it the foundation of the embankment, but a dike of solid masonry to fill up to the level of the bed of the reservoir, to stop the water flowing under the embankment.

504. In such a case as that, would not the water percolate between the masonry and the embankment?—No, because I would cover all over the top with water-tight clay. The slope would come over that.

505. Supposing you were not to use masonry for that purpose, what other material would you use?—Puddle; but I would rather use masonry.

506. Mr. *Smollett.*] Have you seen some very large reservoirs made entirely of stone embankment; have you not seen one at Vizianagran?—No.

507. You have seen the St. Thomas Reservoir at Madras, entirely faced with stone?—Yes, but that is not an embankment reservoir.

508. But it is a reservoir perhaps as large as the reservoir at Vizianagran?—That is of a different kind altogether; there is no pressure of water; it is merely an excavation lined with masonry; and it does not apply to this case.

Mr. John Fowler, called in; and Examined.

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509. *Chairman.*] You are a Civil Engineer?—Yes.

510. Have you been employed by the Sheffield Waterworks Company to examine and report on their works?—Yes.

511. You had a certain programme put into your hands as to what you should inquire into?—Yes.

512. Can you state what that programme was?—It was divided, I may say shortly, into two parts; first, as to the cause of the accident, and next, to advise the company what should be their mode of proceeding with reference to the completion of the damaged work, and the other works.

513. You mean, by the damaged works, the Bradfield Waterworks?—The reservoir which burst.

514. You reported to that company in conjunction with Mr. Simpson, Mr. Hawksley, Mr. Bateman, and Mr. Harrison?—Yes.

515. Are you at this present time, from any further experience you have obtained, inclined to adhere to all that was stated in that Report?—I firmly adhere to it. I may say, that before we made that Report we exhausted the subject, so far as facts and information could enable us to do so. There is, I think, nothing which can be added to the facts, or to the Report. Since that time, I have personally examined the Glasgow Waterworks, so that in case the Committee desire to ask me any questions with reference to the Glasgow Waterworks, commonly called the Loch Katrine Waterworks, they may do so.

516. In that Report you stated that the original embankment was intended to be made in one place, and that intention was changed, in consequence of information gathered of the danger of the site?—That was so.

517. Do you think that was a wise determination?—Certainly.

518. Do you think it was a wise determination to choose the site that was taken?—Subsequent events proved that it was not. Subsequent events proved that the landslip on which the first embankment was commenced was not altogether escaped in the position that was selected for the second embankment, although as far as we could judge there were no outward indications of a slip at that site. It is quite clear, from what occurred, that the landslip was underneath the site of a part of the embankment, and that it was not altogether escaped by the removal. In fact, it should have been removed about a hundred yards further away from the orignal site than that which was selected.

519. Do you think that the cause, which eventually in your opinion created the accident, could have been discovered, if proper precautions had been taken to bore the ground, and ascertain the nature of the ground?—I do not think borings would have given information. I think you must seek carefully for all outward indications, such as new or ancient movements of the ground, and that that alone would guide you in such a selection.

520. In your examination of that ground, are you at all aware whether there were any springs under the embankment?—From the information we

we obtained, I should say there were no springs under the embankment; there were springs at the site of the reservoir, which found their way to the embankment through the open strata in which they occurred, but none I think under the site of the embankment itself.

521. In the site of the embankment there was a puddle trench dug deep down?—Yes, taken down until it met with the solid ground.

522. Are you at all aware whether that puddle trench did not fill with water, and require something like a steam engine to empty it before the puddle was put in?—Water came into the puddle trench, certainly; and, in all cases, when a puddle trench is made deep through ground of all formations, water does, in larger or smaller quantities, percolate into it. In that case I think, without exception, it was found that the water came from above, from the inside of the reservoir, and found its way through the open sandstone to the site of the puddle trench. The puddle trench would cut off all streams that had found their way down the strata, and would admit them into the puddle trench itself. The fact of the puddle trench intersecting for a considerable length, and a considerable depth, strata of various kinds, chiefly open, through which the water could percolate with greater or less freedom, would naturally involve a considerable quantity of water being intercepted in flowing into the puddle trench; and if there were more than was necessary for the work the surplus must be pumped out.

523. In short, the water fell into it, and did not rise into it?—Just so.

524. Are you aware that, the water being there, the puddle was put in?—I should think it would be so. That would be no disadvantage, excepting to get rid of the excess as soon as you could.

525. You think there was no increase of danger by doing that?—No; the great danger in making puddle at all times is in not being constantly saturated with water. Nearly all kinds of materials which form puddle, especially any of the marly kind of material, require a very large quantity of water to make into a good puddle.

526. So that anybody who supposed that was an imprudent way of making a puddle trench would be mistaken?—Entirely mistaken.

527. Have you examined the geological character of that valley?—Yes; I am very familiar with the district.

528. In your opinion is the geological character of the valley a dangerous one in which to make an embankment?—No; on the contrary, it is rather favourable; excepting for this accidental landslip, where, of course, you could scarcely get anything more unfavourable or more dangerous, the material is good and the geological formation is favourable; that is to say, that you have a sufficient quantity of sound, strong material to form a solid embankment, without any danger from slipping; and you have a sufficiently good material with which to form a good puddle; and those are favourable conditions for a good embankment.

529–30. The landslip, I take it, arose in consequence of springs under the land that slipped?—No doubt slips always occur by the presence of water forming what may be called a lubricating medium; and when you get within certain inequalities, and disturb the state of repose of the material, a slip occurs. A slip is frequently produced by very small means; for instance, the side of a valley may remain hundreds of years without disturbance, and if you cut away the toe to a small extent you disturb the equilibrium and produce a very large slip; in constructing the Severn Valley Railway very serious slips occurred on many parts of the line, and in some cases apparently where the ground was previously in a sound state; but by disturbing the state of equilibrium, by cutting away the toe which was necessary to form the level, the ground, in some cases for several hundreds of yards, was disturbed, and a slip would occur from one of two causes, either by making it more easy by the presence of water or by taking away the support on which it rested.

531. You have stated that no benefit could arise from sinking a shaft or making borings to learn what the state of things was; would not sinking a shaft in a state of things like that lead you to know whether there was any water likely to flow into it?—I think you asked about borings; sinking a series of shafts would of course give you very much superior information to borings. You would be able, by sinking shafts, to ascertain several things which you could not ascertain by borings. You would ascertain exactly the different strata, and you would be able to ascertain the condition of things as regards water; and if a series of shafts were sunk, I think they would give you information which would be useful.

532. Supposing a series of shafts had been sunk across that valley, would it not have pointed out to the engineer the danger of a landslip?—I think it very doubtful, indeed, unless you had previously supposed that there was a landslip, so that you might have directed your examination with a view to detect it. I think, unless you had reason to believe there was or might be a landslip, it would have been very difficult indeed to have found out the fact by shafts. No doubt a great number of shafts sunk sufficiently deep would have given you information as to the nature of the strata.

533. But, as a geologist, would you not know that a landslip had taken place within a certain period in a valley like that?—You would know whether the strata were conformable; you would know whether faults were in existence on the site of the embankment; but it is very difficult to say whether you would be able to detect the presence of a landslip, because a landslip may show strata to be conformable, or very nearly so; but it may be that a landslip has occurred, or is on the point of occurring, by reason of the same disturbance of the weight or by the new presence of water that flows between clay and shale, and it is very difficult, indeed, by any system of borings or shafts to detect with certainty that there would be a landslip, or that a landslip might be produced by the operation of your works. The information which you would get by the shafts which would be useful would be, the nature of the strata and the dip of the strata, and that is always an important guide to an engineer.

534. Of strata there were various kinds, and even of different ages, were there not?—Yes. The dip was generally in a direction down the valley. It was not a very steep inclination, but the ground to some extent is irregular and broken up; it was not perfectly conformable.

535. After having made what you considered a requisite examination of the ground, should you have thought, previously to the accident, that this was a safe place to make an embankment?—I can scarcely say to what extent my suspicions would have been aroused by the necessity which

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had occurred for changing the site of the embankment, but naturally it would make me exceedingly suspicious and exceedingly careful to escape the disturbed ground. I have no reason to doubt that the engineer in charge of the works did take sufficient care and did use every means possible to enable him to fix upon what he believed to be a sound site for the embankment.

536. I think your chief experience has been in making railways?—I have had great experience in the making of embankments. I was connected with the Sheffield Waterworks, and had to do with all their early reservoirs, for many years. In fact, the Redmire Reservoir and several of the other reservoirs were made at the time, I had the opportunity of seeing very much of them.

537. Will you inform the Committee whether all the dangers from landslips do not exist where you are placing a viaduct across a valley?—Except that in making a viaduct across a valley you carry down your foundations until you get to what you believe sufficiently safe and solid ground, and then you fill up the ground again with a perfectly solid material which is clear of the viaduct; so that you leave the ground in the same state as you find it with reference to the material; that is to say, you do not, as you would in the case of a cutting of a railway, leave a constantly disturbing cause. In the case of a viaduct, although you cut out the ground, you fill it up again.

538. If that were done in the case of the embankment of a reservoir, would not the same safety arise in that case as in the other?—The case of an embankment is very different in this way. The pier of a viaduct is a small work, occupying a very small space; an embankment of a reservoir is placing a weight on ground that may not be in a condition to bear it; and the result may be that if there has been an ancient landslip it will be more ready to slip again. If there has been no landslip there is a condition which, placing this weight upon it, may produce a landslip. I think the cases of an embankment or a viaduct are a little different in that respect. In all cases of a viaduct, either by means of driving piles or sinking foundations, you go through all doubtful ground to a perfectly solid foundation. Perhaps a more parallel case would be to compare a puddle trench to the pier of a viaduct, because in the case of a puddle trench you do actually cut through all doubtful ground and secure your clay (the puddle) to the ground which you believe is impervious to the passage of water. In the case of the pier of a viaduct you carry your foundations down to ground which you believe to be perfectly solid.

539. Then the same danger exists from a landslip against the foundation of a viaduct as against a puddle trench?—Precisely.

540. You suppose, then, that although they learned that there had been a landslip they took all sufficient precautions, and all human means to guard against danger, and that all such precautions as experienced engineers would take were taken?—Certainly; you had in that case an experienced engineer with experienced assistants, who knew the country thoroughly before, and who had carried out large works with success.

541. Did you hear the evidence which was given by Sir Arthur Cotton?—I heard a part of it.

542. Did you hear the statement that Sir Arthur Cotton made as to the mode of making embankments in India?—No, I did not; but I am quite aware of the mode. That is entirely owing to the condition of labour there, that is to say, they are made with material carried in baskets on peoples' heads, and then it is thrown into the bank, and people tread it down. That is a way which is quite impossible in this country.

543. Did not you hear Sir Arthur Cotton state that that last matter, namely, the treading down, was a matter which he considered utterly unimportant?—No, I did not.

544. Did you hear him say that they never used a puddle wall in the midst of an embankment?—I think that if Sir Arthur Cotton stated that he is mistaken; I know they do so in India; they make embankments by both means; one plan is the old plan which was adopted in this country many years ago, namely, to make an embankment without a puddle wall, but they also make embankments in India with a puddle wall.

545. Are you talking of native engineers or of European engineers?—I do not know by whom made, but I know the fact that they make embankments by both methods.

546. Can you inform the Committee of individual cases within your own knowledge?—I will endeavour to do so.

547. You think that puddle wall in a puddle trench is an increased precaution against danger?—No doubt of it; it was one of the improvements which have been made in the making of railroads in this country. Formerly we depended on making the whole mass of the embankment with sufficient reference to its being impervious by the nature of the material, and the way in which the material was dealt with, as to make it water-tight; but, very obviously, you got into this difficulty, that the workmen knew perfectly well that it could not be necessary to take equal means with the whole of it, and therefore you got a great mass of work imperfectly done; whereas, if you depend on a certain quantity of material for the reservoir being water-tight, greater attention is paid to that, both from the selection of the material, and to its proportions, and you get reservoirs much more water-tight than you do by the old plan.

548. Did you hear Sir Arthur Cotton describe the effect of the inner slope of the embankment?—No, I did not. I may state, that in making my investigation of the Glasgow Waterworks, the only defective embankment I found was one which had been made without a puddle trench about 20 years ago, and that embankment had never been, and is not now, in a satisfactory state. I reported accordingly, and advised that it should be re-constructed with a proper puddle trench before it was allowed to be filled with water again, and, in my opinion, it was not safe to fill again. That was the only defective part of the works which I found.

549. Mr. *Smollett.*] That is a recent work?—Loch Katrine works is a recent work, but the Glasgow Waterworks include also the waterworks on the Clyde. One of the old embankments was the only defective embankment I found, and that was made on the imperfect plan of making an embankment without a puddle wall.

550. *Chairman.*] Do you fancy that the rule laid down by Sir Arthur Cotton, that you should not tamper with an embankment, but that all your

your sluices for letting out the water for any purpose ought to be through the natural ground at the side, should be laid down as a fundamental rule?—No; it seems to me perfectly immaterial, if the ground is sufficiently solid, whether you place your discharging sluices in solid ground, through the embankment, or carry it round outside the reservoir altogether. Provided the ground is sufficiently solid, it is perfectly immaterial where you place it; and therefore I should not lay down that as a rule. That is one of the dangers of trying to lay down rules. Unless you knew the conditions, some of your rules would not apply. That is a rule which I should demur to altogether, as being an unnecessary rule, although in some cases a proper system to adopt.

551. Do you feel the same repugnance to the use of pipes?—I certainly prefer not to use pipes, except you place pipes within the discharging masonry sluices; that is to say, where you can always have access to them.

552. So that you might also have power over the quantity of water sent through them?—Yes; if you adopted the plan of placing pipes through a discharging culvert of masonry, you would have two means of discharge: one, that which may be called the mere discharge of water for the purpose of getting rid of it through the sluice which would discharge the water through the culvert, and the other, the sluice which would discharge through the pipes for the purpose of supply. Of course, if you wanted to ged rid of the water in a short time you would open all the sluices, both those which pass the water through the culvert, and those which pass the water through the pipes; and I think that is the better and safer mode of acting.

553. So that, in fact, you would make the sluices to empty the reservoir, to be the receptacle for the service pipe going through it by which the inhabitants were served with water?—Yes; I think that is a mode of construction which is very satisfactory. Of course, it is rather expensive, and it was the mode of construction adopted by the Sheffield Waterworks Company in their early reservoirs; for instance, in Redmire, with which I had most to do a great many years ago, that plan was adopted of making the culverts of strong masonry in the solid ground, and making pipes for the supply of that culvert; and that plan has been adopted in many cases, and I think I may say that it is the plan that is usually adopted.

554. Do you fancy that there might have been made so large a mode of getting rid of the water as to have rendered the danger that really was created a minimum danger?—Certainly nothing that could have been done at Bradfield reservoir in the way of increasing the discharging power, would or could have any probable effect as to the accident.

555. Mr. *Smollett.*] That particular accident?—Yes.

556. *Chairman.*] Do you say that because there was so large an increase of water in so short a time?—I say it because of the nature of the accident and its rapid completion of the destruction. There was nothing that could have been done in the way of discharging power, even if it had been the creating of a flood, which would have been sufficient to have prevented that particular accident.

557. You think, then, that the landslip was so violent an irruption on the embankment, that no means of letting off the water by sluices would have prevented the mischief?—Certainly; it was so rapid, that to have had power of discharge sufficient to prevent it, would have been something nearly equivalent to the discharge of the water which occurred by the bursting of the bank.

558. You heard Mr. Hawksley's notion about the danger arising from appointing a Government inspector; have you any objection to a Government inspector?—No, not under proper rules and regulations, and laying down proper functions for the Government inspector to be guided by.

559. Will you state what you call "proper functions"?—For instance, I should think it very undesirable to have a Government inspector who would be responsible by interfering with the progress of the works. You could only adopt that plan by dividing or assuming the responsibility and relieving the Company's engineer from it. That I am quite sure would be undesirable in the interest of public safety. But I see no objection to a Government inspector being required, as in the case of railways, to make an examination of the reservoir before it was filled with water; to see, for instance, that the embankment is reasonably sufficient and secure, and the height above the discharging level, that the slopes are properly and sufficiently protected against the wash of the water, that the discharging area of the by-wash is sufficient to prevent an accumulation of water in case of storm floods, and (as in the case of railways) to see that so far as an examination of matters that are apparent to the eye, the public safety has been considered; and then that the report shall be not to Government to take upon itself the responsibility of saying that the work is sufficient and is safe, but to point out the points, if any, on which further precautions should be taken. Then, again, that being done, and assuming it to be satisfactorily done, I think it would be very undesirable for Government to take upon itself the responsibility of the manner in which the reservoir should be filled with water, because that would be dividing the responsibility, which I should always avoid, and leave it entirely to the company to adopt such time for filling the reservoir with water as should be prudent and proper for them to do. It is very important, indeed, in dealing with Government interference to attempt to solve the problem of securing public safety by inspection, and at the same time avoiding that which would be very undesirable and attended in my opinion with many evils; the introducing a division of responsibility; because although you may obtain both for railways and reservoirs Government inspectors, who from their character would be perfectly proper for such work, yet they would not in all probability be the best possible persons to substitute for the engineer in the carrying out of the works.

560. At the present moment, is it not, in the case of railways, within the power of the Government to say, you shall not open that railway?—It is.

561. Would you have the same sort of power given to Government with regard to a waterworks company, you shall not open the reservoir?—I think you must do that. If you introduce a a Government inspector, with the same functions that a Government inspector has in the case of railways, I think you must give an equal power to the Board of Trade.

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562. Do you not there militate against your own rule, that is, divide the responsibility, because the Government inspector says "You may fill it with water", and you fill it with water, and it bursts, who is answerable?—So you may, in the case of railways, open a railway where there is an embankment or a slope, and you may have an accident; but the Government inspector does not in that case incur any responsibility; for instance, all that the Government inspector can usefully do in the case of railways is, first, to see that, so far as an examination of the ground in cutting and embankment is concerned, there is no dangerous slip to be apprehended; in the case of all bridges, and viaducts, and other works, they ascertain that sufficient strength has been given, and that there is no indication of weakness or imperfection. In the case of platforms and stations and signals, they ascertain that there are the means of working the line, so far as general examination can be carried, with safety and convenience to the public, but leaving to the company and their engineer the detail of both the construction, and afterwards the working.

563. In that case, you think that an inspector who allows a faulty railway to be opened incurs no responsibility?—Certainly not.

564. Why should he incur responsibility if he allowed a faulty reservoir to be filled with water?—I do not think that he would.

565. Then why should you not give the inspection?—I would propose to give the inspection, in the case of reservoirs, exactly as in the case of railways, and with the same power, namely, to forbid its use until certain requisitions which were thought necessary had been complied with.

566. In building an embankment for a reservoir, when you have raised the embankment, we will say three feet, you cannot judge at all what is underneath?—No.

567. And when the embankment is made, how do you tell whether it is a faulty embankment or not?—You cannot tell.

568. Then what is the use of inspection?—It is perfectly impossible to have inspection, except it is the substitution of the inspector for the company and their engineer, beyond that which I have indicated; namely, to see whether the discharging power is sufficient in the case of pipes, that the reservoir is sufficiently high for its situation against storms of wind, and that the water is protected by stone; on those matters, just exactly as in the case of railways in examining cuttings and embankments and examining the strength of bridges, the Government inspector could tell whether the proper provisions had been made for safety. It is impossible to get a Government inspector to have the means of saying whether an embankment has been properly constructed, or whether a puddle wall has been taken down to proper ground, or carried up with proper care, except he takes the functions of the engineer of the company, and both by himself and his agents sees every part of the operation performed.

569. Then, in fact, an inspector, according to your idea, is hardly any protection at all?—I think it very important, and quite as much as can ever be obtained; because it is very important to see that you have got discharging power, and that you have got protection against wind.

570. Are embankments usually on the water side faced with stone?—Yes.

571. Was the Bradfield Reservoir faced with stone?—Yes.

572. Then it may be assumed that your view generally is that which Mr. Hawksley expressed of the advantages from Government inspection; that it could only be employed after the works are constructed, and not during their construction?—I have thought of it very carefully, with a view to see how useful inspection could be carried further, and I confess that I do not see how it is possible to do it.

573. In the Bradfield reservoir the mode of emptying or relieving the reservoir was first by two pipes and a by-wash?—Yes.

574. Was the by-wash of such a size as you think prudenced ictated?—The by-wash, according to my calculation, would have at the time of a very extraordinary flood indeed a depth of two feet passing over it. Of course it would be quite sufficient for its purpose even with two feet passing over it, provided the embankment was made higher with reference to those two feet; because if the embankment is only made above the by-wash, as if the water that passed over the by-wash was almost a film without thickness, it is quite clear that if the surface of the water was raised to the extent of two feet in height, the embankment above the water would be inadequate to the purpose. If the bank was sufficiently high above the greatest level at which the water could pass over the by-wash, then no doubt the by-wash was sufficient for the purpose.

575. Was it so in that case?—I do not know; the embankment was not finished, and I do not know whether it was or not.

576. In the actual state in which the embankment was?—I did not see the embankment before the accident.

577. You saw it after the accident, and therefore you know how high it was?—It had been washed away.

578. Not all washed away?—The part near the by-wash was not washed away. I did not measure it.

579. You seem rather disinclined to answer the question?—Not in the least; I do not know the fact, and I do not remember the height of the embankment above the by-wash.

580. So that, in fact, you can give no evidence whether that by-wash was proper or not, as compared with the bank?—No, I cannot, as compared with the bank; I believe I did know the level of the bank above the by-wash at the time, but I do not remember it at this moment.

581. Can you call to mind the quantity of water that might be let off within an hour by the by-wash and by the other means of letting off water?—I do not remember; but in making the calculation of two feet I assumed the most remarkable flood of which there is any record, and that nothing was passing out through the pipes at the time.

582. The pipes were shut, I think?—They were.

583. If the pipes had been opened when the danger was first discovered, and there had been a sluice that you might have lifted, and the water lowered rapidly, do you think by that means you would have lessened the danger that was incurred?—Certainly not in that particular case; the action of destruction was too rapid for any increased discharging power to have any useful effect.

584. So that, in fact, the danger that really did arise

arise was not enhanced, in your view, by any want of power in the pipes, or the by-wash, or the sluice, to let off the water?—No, certainly not.

585. In fact, may your evidence be summed up in this way; that you think that all proper precautions were taken to prevent accident, and that the accident may be said to have arisen from the fault of nobody?—That is my opinion. Of course, after that accident, and after every other accident, one sees perfectly well in what direction one would be very careful if it had to be done again.

586. When you inspected it after the accident, were you able to judge whether there had been leakage in the embankment?—I think I may say that we ascertained, beyond all doubt, that there had been no leakage whatever. The bank was perfectly tight.

587. So that, in your opinion, the pipes in no way contributed to the accident?—We know they did not. We ascertained they never had been moved in any way; and that was the advantage of the careful examination that we made before the report was made.

588. Is there anything which you would suggest to the Committee as a proper precaution to be taken by legislation in the making and preservation of reservoirs?—Nothing beyond subjecting every reservoir to the inspection of an officer appointed by a department, and whose approval or the approval of the department should be necessary before the reservoir was permitted to be used for the purpose for which Parliament had given power for its construction.

589. The only power you would give to the inspector would be to say, you shall or shall not fill the reservoir; and the mode of filling, you think, should be left entirely to the company?—I think so; and for this reason, that it would be impossible to adopt any other course, as it seems to me, without substituting the responsibility of the officer of the department for the responsibility of those who ought to be responsible for its construction.

590. Did you hear Mr. Hawksley say that he would have the reservoir filled by steps, as it were, and that it should be filled to a certain number of feet, and if it stood, then permission should be given to fill it a certain number of other feet, and so on?—No, I did not, but I see no objection to that, which, instead of one inspection, would be a number of inspections; that is to say, when the reservoir is filled a certain height it should not be filled higher until the Government inspector has seen it, to see whether it leaks or not. I do not see much practical use in it, but I do not see any objection to that kind of inspection.

591. After all that inspection such as you propose, do you think there would be any appreciable increase of safety?—I confess that I do not think there would. If you take the case of the Bradfield reservoir, there is no doubt whatever that if that reservoir had been inspected, from time to time, as the water rose every five or 10 feet in the reservoir, the result of every inspection would have been a report that the work was perfect, and that there was no leakage, and it must have been so, because there was no leakage. It was only when the reservoir was absolutely filled that the danger occurred. I do not therefore think, if you had the Bradfield case over again, with any amount of inspection or supervision that could be given, you would have any increase of safety.

592. Do you suppose that the inspection itself would, in a certain degree, be a hindrance to the company?—If it was an inspection after completion it would be no more hindrance than that which was due to regulating the quantity of water to be put in the reservoir, from time to time, and possibly waiting for the inspector going down to examine the works before any further water was permitted to go into it; except that, which I do not think sufficiently important to be an objection, there would not be any interference with the company or their works. If you were to attempt to carry it further, and require the works to be carried out under the supervision of Government inspectors, I think you would get into great evils without the least good.

593. A Government inspector must be paid?—Certainly.

594. Do you think that the advantage to result from his inspection is worth the payment?—I think to the extent that I have mentioned to the Committee it would be; that is to say, as in the case of railways, inspection after completion.

595. In your experience, have you ever known a Government inspector to prohibit the opening of a railway?—Continually.

596. Does advantage arise from that?—Small advantage and small disadvantage; in my own case, several times the Government inspector has forbidden the use of the railway, and kept the railway shut against the public, and then has been obliged to give way in consequence of being wrong, and then the railway has been opened to the public, so that that is an evil from inspection.

597. That is to be put on the debit side of the account?—Yes; on the whole, I think, it is well to have it, but there are objections to it; for instance, one inspector has a peculiar crotchet with regard to signals; another inspector has a peculiar crotchet with regard to fixing points, and another inspector has a peculiar crotchet as to the mode of testing the cross girders of bridges; and unless engineers are certain beforehand who is the inspecting officer to be employed, they run great risk of doing that which will not be acceptable to the particular inspector who is to be employed, whereas if another inspector is sent, everything would have been right; that is an evil, not a very large one, but it is an evil.

598. Lord *R. Grosvenor.*] Would not those evils which you speak of as attending Government inspection of railways increase doubly from Government inspection of waterworks, because the principles of engineers differ so much?—If it meant an inspection during construction, and to lay down the mode of construction, I think it would be an evil so great that no one reservoir would ever be completed, and it would be necessary to apply to Parliament to change the system. The attempt to lay down rules, as I heard Sir Arthur Cotton attempt to lay them down, without reference to the particular circumstances and conditions of each particular case, would be very much worse than useless; for you would not only waste a great deal of money, but very often do the wrong thing.

599. But that would be the great difficulty of appointing a Government engineer; that the views of engineers on this particular branch of engineering are so different that the Government inspector might differ entirely with the engineer

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of the works?—Certainly; and I should think it very undesirable to have a Government inspector with reference to the use of reservoirs, unless there were some appeal either to some engineer of acknowledged position and experience, or to the President of the Board of Trade itself, or in some other way.

600. Mr. *Kendall.*] You have come to the conclusion, after your visit to Bradfield, that no discharging power could at all have remedied the evil?—Certainly not, or prevented the accident.

601. And that it all arose from the original mistake as regards the extent and the influence of the landslip?—It did.

602. There is a point on which you touched rather tenderly, as to the value of borings and the value of shafts; you admitted that, with regard to shafts, where there was suspicion, shafts might be very useful?—Shafts give you information much more valuable than borings.

603. Here was a case of suspicion; here was a landslip that was known to exist; here was an evil that you wished to avoid. I want to ask you whether, upon your own responsibility, you would not have felt it necessary, seeing that suspicion was roused, to have sunk shafts and ascertained the extent of that landslip which did cause the individual danger?—It is exceedingly difficult to say what one would have done.

604. You have acknowledged that you would use shafts where you had cause for suspicion. Here there was cause of suspicion, and you would try to avoid that evil. If you were there as the engineer, do you not think you should yourself have sunk shafts to find out the extent of that danger which was afterwards known to exist?—It is extremely difficult to say what one would have done under the circumstances of the case as you put it before the accident happened, because now we are all looking at this thing with the light which the accident has given us. I certainly should have been very suspicious; I certainly should have examined everything with the utmost possible care, and over and over again; and I should have satisfied myself, by some means or other, that I had escaped the landslip. Whether I should have felt it necessary to do so by shafts or not I am not prepared to state.

605. You do not feel quite sure that you should not have sunk shafts?—No, I do not.

606. From your experience, do you think that, taking nine cases out of ten where you have seen reservoirs, the soil will of itself, as a frontage against the water, be thrown down by its own weight, and become so compressed as to be water-tight?—In nine cases out of ten it would not be water-tight; and in these cases where embankments were made without a puddle wall a kind of rough puddling or working of the earth was always adopted, and to some extent a kind of rough selection was made. But the great fault of the system was this, that there was no attention directed to any specific point or specific and defined dimensions, and people were led to feel that the whole thing rested upon that as a secure and satisfactory work. I have given the Committee an instance within my own experience very pertinent to that point, in the case of the Glasgow Waterworks.

607. Do you know a case of any reservoir being made without a puddle trench?—No; none are ever made now, I believe, by any engineer under any circumstances in this country.

608. Would you prefer, if you could avoid it, leaving your artificial work untouched by any pipes or by any exit of water, and making it entirely in the solid ground?—I would put it in the solid ground, whether I put it under the embankment or not.

609. Mr. *J. Tollemache.*] Had there been other landslips in the neighbourhood of the Bradfield reservoir?—No, I think not. There are very few landslips, indeed, in the neighbourhood of Sheffield, or in this formation.

610. Might this landslip, which did take place and caused this disaster, have been foreseen?—It might have been foreseen; that is to say, it is possible that the engineer might have suspected that unless he took his embankment a greater distance from the original landslip, he would not be perfectly secure; but I do not believe that it could have been foreseen after the works were commenced, nor would anything have indicated either to a Government engineer, or any other person, that there was danger, until the accident actually occurred.

611. Before the work was commenced, as landslips had taken place, was it not known to be a suspicious site?—No; the ground on which the embankment was formed, in all probability, was as perfectly solid as anything could be; there was no indication on the surface, on the contrary, the site of the embankment was removed, until the ground appeared to be perfectly solid and secure, and where no movement had ever taken place.

612. That is, as regards the site of the embankment?—Yes.

613. The land that did slip, I suppose, rather overhung the embankment?—That is so; the ground that was disturbed was under the seat of the embankment. To all outward appearance, however, the site of the embankment was perfectly secure.

614. Do you believe that if you had been the engineer employed, you would, in all probability, have selected that exact spot, notwithstanding the appearance of the land above it?—It is exceedingly difficult to say what one would have done. Having had my attention directed to the landslip, so as to make it necessary to change the site of the embankment, I would have taken very good care to have a margin to be quite sure that I was away from it. All that one can say is, that one would naturally do that, and would not run it very fine. You may be quite sure, that when you got to a point at which you felt you were not beyond the influence of the landslip, you would go higher. There was no particular advantage in having the embankment at that site.

615. Could the embankment have been placed on a spot where no landslip was possible?—Yes; for instance, it might have been placed 100 yards higher up.

616. And then no landslip would have been possible?—Certainly; and if the engineer had thought for a moment that the site where he was placing the embankment was less secure than 100 yards higher up, he would naturally have removed it 100 yards higher.

617. Would there have been additional expense in removing the embankment to a place where a landslip was impossible?—No; I think very little, if any, additional expense. It is rather difficult to answer that question exactly, because it depends on the area of the embankment, as compared with the contents of the valley formed by that embankment; but certainly nothing, if anything,

anything, that would influence the decision of the engineer as to the safety of the embankment.

618. Do you conceive that the embankment itself was constructed on the very best principles?—Certainly; most excellent work.

619. With regard to the sluice pipes, were they protected by masonry?—No.

620. If, in your judgment, the embankment was constructed on the very best principles, how do you reconcile that statement with what you have previously stated, namely, that the pipes ought to be protected by masonry, or that there should be masonry, in lieu of pipes?—If you meant to exclude everything relating to the embankment, I should say, with reference to the pipes, that although in this particular case, the pipes were perfect, and never moved, and were not in any way the cause of the accident, or assisting to the accident, I think it would be better to put the pipes in a masonry culvert, where they can always be seen and attended to.

621. Have you seen the Woodhead Reservoirs, which supply Manchester with water?—Not lately; I have examined them carefully.

622. Are you aware that they are now altering the position of the sluices, and placing the sluices through the solid ground on one side of the embankment, as, in fact, has been recommended by Sir Arthur Cotton?—I am not aware of it, it is nothing new; it is a very common mode of construction, and generally adopted. In the case of the Woodhead Reservoirs, I am aware of the nature of the ground sufficiently to know that they have had very great difficulty. The ground is slipping now, and has been for a great number of years, and the reservoirs were made with very great difficulty; and the embankment, in several cases, moved and disturbed the discharging pipe and culvert.

623. You are of opinion that the appointment of a Government inspector to inspect after the construction of the work would be an advantage?—It would be an advantage to this extent, that in case, from any circumstances, the discharging surface of the waste weir was not large enough, or the embankment high enough, attention could be called to those points.

624. Would not a Government inspector, who inspected the works during their construction, be enabled to judge better of the strength of the embankment than if he only saw the embankment after it was constructed?—No, I think not, because you may assume it as a fact about which there is no difference of opinion that an embankment that does not slip is of necessity many times stronger than is necessary for the resistance of the water. All that is required to be done, in the case of an embankment, is to take care it is formed of such slope, with reference to the nature of the material, that it shall not slip, and that the puddle is made sufficiently good, and taken down sufficiently deep to form an impervious barrier to water. Embankments must always be of necessity very many times stronger than is necessary.

625. How can a Government inspector be satisfied that an embankment will be impervious to water if he has not seen it during its construction?—He never could be satisfied of it unless he lived on the spot and was there every moment of every day.

626. Do you think that, for inspection, it would be necessary for a man to be there every day?—Certainly, it is absolutely necessary; because the puddle wall, on which the whole safety of the reservoir depends, as to its being tight, may be imperfect, and mischief may be done in the course of an hour.

627. You are of opinion that no Government inspection could be of a kind which would ensure the embankment being properly constructed without the Government inspector being constantly on the spot?—Certainly not. I am quite satisfied that an inspection during construction would not be of the slightest value; but it would be attended, in my opinion, with unmixed evil.

628. I think the Bradfield Embankment gave way about five or six hours after a few signs of weakness had been apparent?—About that time I think.

629. If immediately after it showed signs of weakness there had been any great outlet of the water, such as that which has been suggested by Sir Arthur Cotton, would not the pressure have been less; and do not you think it is possible that the catastrophe might have been avoided?—Not in the least.

630. Why?—The disturbing cause was chiefly the weight of the embankment, and not the weight of the water, and the withdrawal of any quantity of water within that period by any system of sluice that could have been adopted would not have been sufficient to have effected the accident, or, in my opinion, delayed it to any appreciable extent.

631. Therefore the embankment did not give way from the pressure of water?—Certainly not.

632. Mr. *W. E. Forster.*] You stated that a landslip caused the bursting of the Bradfield Reservoir?—Yes.

633. What size in area do you suppose the landslip to have been?—As near as I can say, about 300 or 400 yards long, and perhaps something less than 100 yards wide.

634. Did that landslip come against the whole of the embankment, or did it come against a part of it?—Against the lower part of it.

635. Do you mean the whole of the width of the lower part?—Yes.

636. Had any landslip happened previously in that neighbourhood?—There had been an old landslip in that neighbourhood on which the first site of the embankment was formed; it is, in fact, the same landslip, and they thought they had escaped it, and did not escape it.

637. Then there was reason to suppose that that locality was subject to landslips?—There was this particular landslip because they discovered it on attempting to form the embankment in the first instance, and the discovery of this landslip led to the removal of the site of the embankment.

638. Do you think that the fact of there having been this old landslip, and also a landslip immediately preceding the accident. made it likely that other slips would occur in the Bradfield Valley?—Not necessarily at all.

639. Do you think that it was possible, or probable, they might occur?—Of course it is possible; but I do not know that it is more probable that, because there was this landslip, there might be others. There is no other landslip, certainly, on the side of the embankment.

640. Are landslips common in all localities?—No, certainly not.

641. Then, would you not say that, this being a locality

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a locality in which you have a knowledge of two landslips, it is probable that other landslips will occur?—I only know of one landslip in that locality.

642. You have spoken of an old landslip, and of the landslip immediately before the bursting of the reservoir?—They are both one; and I thought I had said it was the same landslip. The site of the original embankment was on the old landslip, and it was removed so as to escape, as they believed, that landslip, but they did not escape it altogether: it is the same landslip.

643. When you state that it is the same landslip, you mean that the same land slipped twice?—Yes.

644. How long before the bursting of the reservoir do you think the slip of the land occurred?—Almost at the same time; the embankment followed the landslip at the same moment.

645. Then what is the meaning of the warning five hours beforehand, which has been alluded to?—Probably there might be one or two very small movements before the actual slip which caused the accident to occur; for instance, there might be, and probably was, a small movement which led to the first crack, which was discovered five hours before the accident.

646. Is there any evidence that anybody observed the movement of the ground?—No; you can only assume it by the fact of the crack itself.

647. If a competent servant in the management of the waterworks had been present at the time the small crack was observed, do you think he ought to have foreseen that there was much danger?—No; I think I should not myself have thought it had anything to do either with the landslip or with anything that was likely to give rise to a serious accident. I think I should myself have assumed that it was a small crack brought about by the rain which had fallen, part of which, in all probability was washed over the bank, and had led to a small separation of the outer skin from the outer slope.

648. Do you think that if a person had been watching the reservoir during this heavy rain he would have been able to have given warning to the people below of the possibility of the bursting of the reservoir?—I think everything that was possible was done in this particular case. You cannot have a more experienced or competent man than Mr. Gunson, the Company's assistant engineer who has been engaged in the work during the last 20 or 30 years in that very locality, and who was himself vigilantly attending to the work. I do not think that by having any person, whether another engineer in the service of the Company or a Government inspector, you would be able to secure better conditions for safety than you had in that particular case.

649. Did it so happen that he was watching some hours previously?—Yes; he saw the crack about the time it occurred.

650. How much warning would have enabled the inhabitants to save their lives?—Perhaps a clear start of two or three hours would have enabled most of the lives to have been saved.

651. Would not one hour have done a great deal towards saving them?—A great deal, no doubt.

652. Then are you clearly of opinion, that Sir Arthur Cotton was wrong in assuming that it would have been impossible by bye-washes put by the side of that reservoir to have delayed the destructive flood one hour?—Entirely wrong; because the destruction of the bank from the flood was an instantaneous work; the bursting of the bank and the releasing of the water was a question of a few minutes. Although one can now tell that certain indications meant great danger, it would have been quite impossible to have told, at that time, that they did indicate great danger, and therefore I do not believe that anyone would have taken serious action one way or the other on the occurrence of that small crack.

653. Do you think that small crack, which you imagine first appeared five hours before the accident, remained the same size until the accident?—I believe it did, until immediately before the accident occurred. I made particular inquiries on that point, and I believe it was so.

654. I understood you to say, in answer to the Chairman, that you would take steps with regard to boring, if you saw reason to expect a landslip?—I stated that I would make trial shafts.

655. What would give you reason to expect a landslip?—The doubtful condition of the surface with respect to its having moved, or not having moved at some period of time; because movements show themselves on the surface of the ground for a great number of years afterwards. You may see indications of landslips where there has probably been no movement for several hundred years, but even that would have shown me the necessity of special investigation.

656. Then, wherever you see, as you have seen in this case, that there were traces of an old landslip, you would be especially on the watch to guard against landslips?—Certainly.

657. I understood you to say that if the embankment had been put 100 yards above where it was placed, a landslip would have been, if not impossible, exceedingly improbable?—It would have been impossible, because you are entirely beyond the influence of the landslip; and so they believed they were; they placed their embankment as far as all outward indications on the surface of the ground guided, but unfortunately it was a mistake.

658. Separating the knowledge you have obtained, if you can, since the accident from what you think you had before, do not you imagine that if you had been consulted as to making that reservoir and fixing its site, and you had ascertained (as you would have ascertained) the existence of a landslip, you would have put the embankment 100 yards above, viz., in the place where you now say it would have been safe?—I confess that I am totally unable to say now what I should then have done.

659. Do you think that it would have been clear to you whether it was the safer position of the two?—I certainly should have done that which I have stated, namely, to have taken a margin in the first place as far as I possibly could by every examination and every evidence, and by taking every means in my power to have ascertained that it was beyond the influence of the landslip, and then I should have taken a full margin beyond, and again a little higher still, so as to have made assurance doubly sure. I have no reason to believe that was not done in the present case.

660. The making of a reservoir to hold that quantity of water above a large population required the most scrupulous care, and the consideration of cost was hardly to be thought of?—Certainly;

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Certainly; the consideration of cost must never weigh against public safety.

661. When you state that the embankment was made where there was an old landslip, and that you are clear that 100 yards above it would have been perfectly safe, I can hardly understand your stating that you would have had no doubt in your own mind as to the propriety of putting it 100 yards above rather than where it was put?—I think you misunderstand me as far as regards the 100 yards; it is placed at least 100 yards beyond the original site, and I think more than that; I am not sure of the exact distance; I meant 100 yards above the site of the embankment which failed.

662. You now state that placed 100 yards above where it was put it would, in your opinion, have been perfectly safe?—Yes.

663. I can hardly understand your expressing any doubt that with such a responsibility as you would have acted on, you would not have put it at the place where it would have been perfectly safe?—If it had been presented to me in that form (which of course it would not), there could have been no doubt or difficulty as to the decision; that is to say, if one place was doubtful and another place was perfectly secure, and the difference between the two was the difference of 100 yards, of course no one would hesitate what course to adopt. That is not the way it presented itself to the engineer at the time, nor would it have so presented itself to me. On changing the site of the embankment, I should have taken every means in my power to have secured the new site to be beyond the reach of the mischief; but whether I should have fixed it as it was fixed, or a hundred yards higher, of course I am not able at this moment to tell.

664. These landslips are difficult to guard against, are they not?—They are; they are very difficult, in all engineering works, to guard against entirely.

665. Of course they are more difficult to guard against in the case of a reservoir, because the existence of the water may be the originating cause which sets the land in motion?—Yes; they are in every way more difficult to deal with in reservoirs than other works. If you have a landslip in a cutting or in an embankment of a railway, you get other material, and apply remedies which are not open in the case of a reservoir.

666. Do not you suppose that in constructing a reservoir, especially above a large population, the engineer ought to satisfy himself that he has done everything which the site will admit of for the purpose of guarding against the possibility of such an accident?—Certainly, it is his duty to do so.

667. Still you acknowledge that one of those sites would have been safer than the other?—With our present knowledge, we are able to say so.

668. You do not think you would have been able to say so before?—I think not.

669. When you say that you recommend inspection, I understand you to say that you recommend inspection after construction; would you recommend inspection during maintenance?—There is no such thing as maintenance of embankments, except permanent maintenance. There is no maintenance which begins at the end of the construction and ends at any given period.

670. Would you not recommend inspection, not only to certify that a reservoir is fit to fill and be used, but an inspection from time to time to see that it is in good repair?—I scarcely think that such an inspection would be necessary; at the same time, I see no serious objection to it.

671. Do you know any particulars about the Holmfirth Reservoir?—Yes; I went to examine it at the time the accident occurred.

672. Are you able, from your inspection, to answer whether any competent Government inspector would have given it as his opinion that the reservoir had been allowed to go out of repair?—I am not sufficiently acquainted with the facts to give an answer to that question.

673. Would you recommend inspection before the choice of site?—Certainly not.

674. Do you think it improbable that any Government engineer, who would form his opinion entirely irrespective of cost, might not have been able to discover that one of these sites was safer than the other for the embankment?—I think it is very improbable. In the first place, no engineer would be guided or influenced in his decision by cost, if it was a question of cost *versus* risk; and, in the next place, it is quite natural to find (as in fact you do find) that the engineers who are engaged in carrying out these works, possess very much more practical experience, and are much more competent to decide on the site and the mode of construction, than any Government inspector who could be employed. You would merely have the substitution of an inferior for a superior man.

675. Then the only inspection that you recommend is an inspection, authorising the undertakers to fill the reservoir?—I confess that I see no other inspection which would be useful.

676. Would not such an inspection given only at one time, be liable to the disadvantage of making the pecuniary responsibility upon the undertakers less, if the reservoir were to burst?—No more than in the case of railways at present.

677. Have you seen a copy of the Bill which is before the Committee?—Yes, and I think some of the provisions of the Bill are very useful indeed.

678. You have observed the eighth clause, the liability of the undertakers for damage?—Yes.

679. You do not fear that such inspection by the Government, as you recommend, would be pleaded against damages which might be incurred under that eighth clause?—Certainly it would not, any more than the present inspection of railways, which is very much of the same nature.

680. I suppose you would agree that if any definite rules could be laid down, such as Sir Arthur Cotton recommended, there would be this advantage, namely, that they would be guards against danger, which would not in any way take the responsibility from the undertakers?—It is impossible, from the nature of things, that you can lay down such rules.

681. If it were possible to lay down such rules, you would see advantage in them?—Certainly; it would be a wonderful comfort to engineers, and everyone else. Many attempts have been made, and always given up as failures.

682. Do you think it quite impossible for a commission of the first engineers in the kingdom to be able to form such rules?—I should say quite impossible. You might attempt to lay down a rule that, under certain circumstances (trying to explain them as well as you could), and

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with certain materials (trying to describe them as well as you could), certain things should be done in certain ways, and you would find in practice that you would only be enabled to hit on some of the conditions, and in some cases not at all.

683. Then is it to be deduced from your evidence generally, that you think the enormous loss of life which follows from the bursting of reservoirs is a liability to which the country must be constantly subject?—On the contrary, I think that accident will be attended with great benefit, as is the case with every accident, whether a railway accident or otherwise. It draws attention to certain dangers, and we are on our guard against those dangers; and I have no doubt that the accident at Sheffield has already been attended with great benefit, by drawing the attention of those who are responsible for such works to the possible danger of similar accidents from similar causes.

684. Bringing that practical remark of yours to practical bearing, do you mean that it was caused by a landslip, and will make engineers more careful and cognizant of the danger of landslips?—Yes; and not only so, but from the serious nature of the accident, the great loss of life, and the enormous responsibility on the company, the attention of every waterworks company and other persons in the kingdom who have charge, either as owners or as engineers, of works of that nature, will be particularly called to it; and there has been the greatest possible attention paid to it from that time, and will be continued to be paid, and therefore there will be very great advantage, I am sure, from the accident in that way. But I do not believe that you will escape the chance of accident by attempting to remove from the proper persons the responsibility which belongs to them, or substituting Government inspectors for the civil engineers, who are entrusted with the construction of the works.

685. You do not think that certain rules could be laid down which should not be broken; that is to say, that certain things should be determined which an engineer should not be allowed to do, and, consequently, the only disadvantage that would happen would be that reservoirs would not be able to be made in certain conditions in which they are now made?—I think the nearest approach to rules you would get would be the inspection to which I have alluded; and the inspection would no doubt result from experience, in the same way as certain regulations have resulted from the examination by Government inspectors of railways; for instance, in determining the strength of iron bridges, the engineer is perfectly at liberty to design such a bridge as he pleases, but Government inspectors require that when completed the bridge shall not, with all the possible weight that may be brought upon it, be subjected to a greater strain than so many tons to a square inch. That is the nearest approach to a useful rule.

686. That was one of the rules which Sir Arthur Cotton rather pointed to, namely, that there should be ascertained by the best engineering authority the sort of proportion which the weight of the water is to bear to the embankment?—I think I heard Sir Arthur Cotton say, and say truly, that the embankment is always very much stronger than is necessary to resist the water, and that whenever you get an embankment which does not slip no question of strength can arise. In the case I have mentioned, with regard to the strength of bridges, you deal with results, and not with means; that is to say, you do not lay down any rules with regard to the mode of constructing bridges, but you merely provide that the bridge when constructed shall be so strong as not to be subject at any time to more than a given strength.

687. Take, for instance, that rule upon which Sir Arthur Cotton seemed quite confident, that no sluices be made through the artificial ground; you do not agree with him on that point?—No; if (as I understood he meant) through the solid ground on which any of the embankment is placed; and I suppose he did mean that.

688. *Chairman.*] He meant the embankment itself?—You would not place a sluice on the surface of the ground which was afterwards to be covered by an embankment. I think he meant that he would never allow a sluice to be placed in the solid ground on which the embankment was formed, but would always take it quite clear of the embankment.

689. Mr. *W. E. Forster.*] Is it not the case sometimes that the service-pipe is made through the embankment?—No; I never knew a case in my life in which it was not put in the solid ground covered by the embankment.

690. Are the Committee to understand you to say that the discharge culvert through which the water is discharged is never made through the surface of the embankment?—I never knew such a case.

691. Supposing the discharge culvert for the reservoir be made close to the old channel of the stream, are the Committee to understand you to say that you know of no case in which the discharge culvert is not made underneath the original level of the ground?—Not unless it is quite down to the ground. In this very case, at Sheffield, a trench was cut and the pipes were laid in the solid ground.

692. *Chairman.*] And puddled?—Yes.

693. Mr. *W. E. Forster.*] Then would you lay it down as a rule that no culvert or sluice should be made through the artificial ground of the embankment?—You might very safely lay that down as a rule, because I never knew a case in which such a thing was done. I never did such a thing, and I should never dream of such a thing, whether I took it under the embankment or outside the embankment.

694. Do you know the Woodhead Reservoir?—I know it, but I do not know its construction sufficiently to speak to it.

695. On that point you cannot speak?—No. Even in the case of culverts for railways you invariably, when there is not the same necessity for the same degree of care, construct the culvert in the solid ground and divert the stream into it; and in some cases an actual tunnel is made. I think Sir Arthur Cotton stated that he would do it in all cases; but, even in the case of railways, we sometimes tunnel for the purpose of putting the culvert through solid ground and removing it from bad ground. Invariably the culvert is cut into the solid ground; so that the top of the culvert is below the ordinary surface of the ground.

696. Then you think there would be no advantage in laying down a rule that culverts should always be made by the side of the embankment instead of underneath it?—In some case it would be totally unnecessary. If the ground were sufficiently solid, the embankment would

would not in any way affect the stability of the work.

697. Do not you think it safe to lay down a rule with regard to the level of the reservoir above which the water is to be allowed to escape?—Certainly not. It could not be done, except with such explanations and conditions as would take it away from being a rule at all. For instance, Sir Arthur Cotton said, and said truly, that the form of a reservoir of great length gives a great reach on which the wind would act.

698. What I mean is, that in a case in which the danger of loss of life is so great, you agree that there is no objection to forcing some companies to incur greater expense than was necessary, in order to insure safety in all cases?—Certainly.

699. Taking that consideration into account, you do not think it would be possible to lay down a minimum which should not be departed from?—Of course you might lay down a minimum so very low, which for most purposes it would be inapplicable, and, therefore, would not be of much value; but although, on the one hand, I should agree to the fullest extent that it was incumbent, both on companies and on engineers who have charge of works of this description, to construct them so as to be safe against casualties such as that which happened at Sheffield, or any other kind, to the very best of their judgment, and that they ought not to be influenced in arriving at that result by any consideration of the cost; yet on the other hand, I wish it to be understood as my opinion, that it is of the greatest importance in all these works to avoid the waste of money; because I am quite sure that we might be led, in railways and in reservoirs and in other works, to such a wild degree, that many useful public works would be prevented altogether being carried out from the large cost and waste of money which might be entailed. Whilst admitting the one, I should put the other as a matter of very great importance indeed.

700. I suppose with regard to the angle of the inner slope, there is an understanding amongst engineers which amounts to a rule?—Two and a half and three to one, it is seldom more than that. The rule with regard to reservoirs is, that you adopt a slope which is, as far as you can possibly judge, perfectly free from the possibility of a slip, because a slip is attended with danger of the most serious kind, and, therefore, you always adopt a slope which is free from the possibility of a slip, and $2\frac{1}{2}$ or 3 to 1 is quite sufficient for that purpose; the outer slope may be steeper in cases of stone, or shale, or strong material.

701. You have attentively read this Bill, are there any suggestions you desire to make to the Committee?—I think, on the whole, it is a very useful Bill; the last clause seems to me almost precisely the same as the special clause which was in the Sheffield Act of Parliament.

702. I have been informed by some persons whose business it is to read these clauses attentively, that they do not consider it is a perfect clause, and that there is some ambiguity in it. To your mind, is there any ambiguity in it?—I see no ambiguity in it. It seems to me to make it quite clear, that no matter from what cause the accident arises, the owners, lessees, and occupiers are to be recompensed by the undertakers in case accident occurs.

703. Mr. *Hibbert.*] Will you state whether the surface sluices of the Bradfield Reservoir were sufficiently large to get rid of the lower columns of water which were intended to be stored?—I think I have stated that in case of extreme floods it would require a depth of two feet passing over it. I think that is more than is usually adopted, and more than I should myself adopt. There is no other objection than taking care that the embankment is high enough.

704. As to the Bradfield Reservoir, was sufficient provision made?—That I am unable to say. I believe that I was aware of the height of the embankment above the sluices at the time of the examination, but I do not remember it now.

705. Would it not be an advantage if certain regulations were laid down as to the size of the surface sluices previously to the construction of the work?—If you lay down a rule, you must of course lay it down with reference to all and each of the cases, such as the rainfall which is most important.

706. Is it not possible to lay down a rule, taking into account the volume of water that is intended to be stored in the reservoir?—It is rather more important with reference to the quantity of water that comes into the reservoir. The quantity of water that is in the reservoir does not in any way affect the discharging area; that which affects the discharging area, is the quantity of water that comes into the reservoir.

707. With respect to the discharge pipes of the Bradfield Reservoir, that was not surrounded by a masonry culvert?—No; but put in solid ground, and laid carefully in puddle, and that is a plan which has been adopted by very experienced engineers for a great length of time, without any damage, and, as in the case of the Bradfield reservoir, has been attended with no disadvantage or damage whatever.

708. Is it not very desireble that all storage pipes should be placed in masonry?—I prefer doing so, certainly.

709. With respect to the valves for letting off the water, was there not something wrong with reference to the valves of the Bradford Reservoir; were they not put in the wrong place?—It was suggested that they would have been better in another place; but you get rid of that difficulty as to the position of the valves, by placing them inside the sluice, because you there get facilities for dealing with, or discharging arrangement of that kind.

710. Is it not your opinion that the valves being placed outside, must have been in a wrong position, it being impossible to get to them?—If you adopt pipes, I do not think it is very material. If you adopt another mode of discharge, I think it is better they should be inside.

711. Is it not objectionable to that plan that you have a pressure of water on the pipes at all times?—You have a pressure, and therefore they are not opened with so much facility. They may be placed so as not to make the opening a matter of great difficulty.

712. Do not you think that the three different points which have been mentioned, are proper matters of regulation for the Government to lay down previously to the construction of reservoirs, namely, the use of the surface sluice, the mode in which the discharge pipes are to be placed (that is, within the masonry), and as to the position of the valves?—I think you might lay down as a minimum the size of the waste weir, and

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and you might lay down as a rule that the pipes shall be so placed that they shall be accessible, and that the mode of discharge by sluice shall also be placed so as to be accessible. I think it very unwise to go further than that, or you may get in a direction to stop improvement.

713. You do not see any objection to going so far?—No.

714. That is, you are laying down regulations to be applied to waterworks similar to the regulations which are laid down with respect to railways?—Yes.

715. But you decidedly object to any inspection of the works during their progress?—It seems to me perfectly impossible to realise such an inspection, except by turning over the construction to a Government inspector.

716. Do you see any objection to a report being made to the Board of Trade, previously to the construction of the works, of the site to be taken, the volume of water to be stored, and a description of the ground?—If it was thought well to attempt control in that direction, the better way would be to adopt the plan which is adopted by the Admiralty, that before works are commenced, plans shall be sent to the Admiralty, and that the works shall not be commenced until they have the approval of the Admiralty. That would be the mode of giving effect to that control.

717. Do you see any difficulty in carrying that out?—It would depend very much on the character of the inspector and the machinery of the department. It might be a great evil, and attended with little or no good; and it would require very great care indeed to make it work satisfactorily.

718. But you see no objection to certain regulations being laid down by the Government, to be followed in all undertakings of that kind?—I think those rules, as far as they can be called rules, would follow such an inspection as I have indicated, in the same way as certain rules have followed the inspection of railways. Experience has enabled Government inspectors safely to lay down certain conditions, such as I have mentioned, in the case of bridges, giving the utmost latitude to engineers and to the improvement of material from time to time, that the result shall be that a bridge shall be sufficiently strong to sustain a certain load with the minimum strain that is agreed on. To that rule engineers have no objection; on the contrary, they think it is reasonable and proper; and that has been the result of the working, and not of laying down the rule previously to inspection.

719. Does Government inspection of railways extend to new material for bridges?—It is rather a delicate subject for engineers to give evidence upon, because they are very much subject to the control of Government inspectors as to the opening of railways; but I have no hesitation in saying that to some extent it does operate prejudicially in that direction; that certain inspecting officers have certain views about certain things, and you must comply with these views, and therefore what we do in practice in certain things, is to do those things which we know will be acceptable to the inspecting officer, rather than do that which we in our judgment believe may be the best thing to do. In every case within my experience, which is now very extensive, I have never known a Government inspector act otherwise than as he conceived to be his duty. I believe that a more conscientious body of men never existed than the Government inspectors of railways; they never spare themselves any trouble in doing what they believe to be right; but I do think that they do not always understand which is the most useful direction in which to give that inspection; and I think that anything which tends to cripple improvement is a very great evil indeed.

720. Mr. *Smollett.*] Do you think the Admiralty regulations work well?—The Admiralty regulations have changed from time to time in their operation. At one time the Admiralty had preliminary inquiries; they sent down to the country an officer appointed for the purpose of receiving evidence and making reports. Generally, those reports were adopted by Committees as final, but, partly from the want of experience of engineers sent down, and partly from other causes, those reports fell into disfavour and disuse, and no preliminary inquiries are now held, and the duty devolves entirely on the Committee sitting on the Bill. Even after Parliament has sanctioned the construction of a bridge over a tidal river, the details of the work are always submitted to the Admiralty, and to that extent I see no objection. I am quite sure that it is very much better that Committees should deal with such matters, than that they should be done by preliminary inquiries. I say that, having had considerable experience of both methods of proceeding. The decisions of Committees are received with much greater respect, and there are much fewer failures of justice by decisions of Committees than by preliminary inquiries. Preliminary inquiries did not work well, and that was an attempt to carry inspection or control as far as possible, and that is an instance in which it failed. I am quite sure it is very important to see, whilst smarting under the great mischief which occurred at Sheffield, that we do not make the mistake of attempting to prevent it by introducing a greater evil.

721. Your opinion is, that in all likelihood, even if there had been a Government inspector employed to see that work at Sheffield constructed, the same mistake would have been fallen into, and the same casualty most probably have been incurred?—Certainly. I do not see that a Government inspector is more likely to have detected anything than the engineer. A Government inspector is not a man of the same experience as an engineer who is employed in such a work, otherwise he would not remain a Government inspector.

722. No greater security than that there are two heads instead of one, and the responsibility is divided?—That is my opinion.

723. Mr. *Ferrand.*] Is not the case of Sheffield a very exceptional case?—Very exceptional.

724. Have you seen many of the waterworks' reservoirs in Yorkshire and Lancashire?—I have.

725. Have you visited the Bradford Waterworks?—Not since they were completed. I was engaged upon them before the Act was obtained, and gave evidence upon them.

726. Did you visit the site of the Doe Park and the Bardon Reservoirs?—I believe all of them.

727. You have stated that if puddle-banks were made without a large quantity of water being

being used, they could not be secure?—Certainly not; they require a very large quantity of water.

728. Suppose an embankment had to be repaired, and the puddle-bank entirely removed for a considerable number of yards, and then that puddle-bank was returned into its former place without any water being used, could you expect that embankment to be secure?—Certainly not; it would require re-puddling.

729. Do you approve of the embankment being taken out of the interior of the reservoir?—That depends entirely upon circumstances; I see no possible objection to it.

730. Was it a wise thing to take the embankment out of the interior of the reservoir at Bradfield?—There is no objection to it whatever. If the material be suitable material, you may just as well take it out of the reservoir as anywhere else.

731. If you take the interior of a reservoir away for making the embankment, and you expose strata of stone and coal, or anything of that kind, does it not then become insecure?—No.

732. Will not the water work through underneath?—Certainly not. You must depend for the security of the reservoir, or rather its tightness, on your puddle wall; and, as a rule, the material is taken, and properly taken, from the interior of the reservoir.

733. Are all engineers of the same opinion?—I do not know.

734. Have you never heard engineers give a different opinion?—I should be very much surprised, indeed, if the material were a proper material from the inside of a reservoir, to hear an objection made that it should not be taken from the inside of the reservoir for the embankment.

735. Even if strata of stone and coal were to be exposed?—That is no objection at all.

736. Did I understand you to say that in nine cases out of ten embankments are not watertight?—No, I did not say so. I said that in nine cases out of ten if you attempt to make embankments without a puddle wall you will not make a watertight reservoir.

737. Do you consider that an embankment should be watertight before the reservoir is used for the purpose for which it has been made?—Yes; when I say watertight, of course there may be some very small amount of leakage without any mischief, under certain circumstances; and therefore I would not say that a reservoir could not be used with safety if it were not perfectly watertight at every point.

738. To what extent do you think there may be leakage without any considerable danger?—It is difficult to say; and for this reason you may have, as you have in the case of the Mugford Reservoir at Glasgow, a leakage not through the embankment, but through some solid winstone rock in consequence of pounding up the water by means of the embankment; and the leakage, under those circumstances, is not attended with any risk; the rock cannot be washed away; it cannot be increased in area; it is merely that the water percolates through the interstices of the rock. In that case, although, of course, it would be much better not to have it if you could help it, it would be almost impossible to prevent it, and it does not appear to me to be attended with any risk or danger.

739. If you heard of an embankment leaking to the extent of 300,000 or 400,000 gallons of water in 24 hours, would you think that reservoir secure?—Do you mean through the embankment?

740. Through it or from it?—I should say that it was in a very bad state.

741. Do you think that any Government inspector would allow a reservoir in such a state to be kept full of water?—It is a little difficult to answer abstract questions, not knowing all the conditions and all the particular circumstances; but I should say that a Government inspector, or an engineer, in such a case as that, would take means either to stop it altogether or greatly diminish the leakage.

742. How long do you think a reservoir should be tested before it is allowed to be in use?—The testing of every reservoir, whether under inspection or not, must be gradual; that is to say, if all the water which comes by the stream towards the reservoir is permitted to flow into it, it will take some considerable time, and a large reservoir getting filled by that process of filling is a process of testing.

743. It greatly depends on the state of the weather?—If all the water comes in, it will occupy a considerable time to fill a large reservoir, and every step is a test.

744. Do you think it can be properly tested in a month?—I do not know any large reservoir which would be filled in a month, even in a rainy season, and therefore you have always more than a month for testing a reservoir. It is the question of the size of the reservoir with reference to the size of the stream running into it. Nearly all large reservoirs for waterworks will occupy more than a month in filling; they are always very carefully watched during the progress of filling.

745. Do you recommend that the foundations of a reservoir shall be properly tested before the contractors are allowed to begin their work?—That is always done; examinations are always made of the base of the embankment before the contract is let.

746. Are borings made to find the water?—Generally, borings on trial holes or trenches, so as to ascertain the nature of the material.

747. Do you state that is always done?—I think invariably; of course, in certain cases, very little exposure is sufficient to show the nature of the ground. In others, it is necessary to make considerable trial holes, and very frequently from the nature of the country where reservoirs are made, one of the chief things is to ascertain the quantity of peat, because it is usual to take away the peat altogether from the site of the reservoir for various reasons, and that is one of the things which is always very carefully examined into.

748. Do you consider that all the reservoirs in England that you are acquainted with are at this present time secure?—I am not prepared to take the responsibility of saying that.

749. Are you aware how long it is since they have been inspected?—Every reservoir that I am acquainted with is under constant inspection; it is a necessity that a reservoir should be either for the purpose of drawing water from it, or attending to it in some way, under almost daily inspection.

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750. By the engineer?—By the resident or local engineer, it will be under inspection, no doubt.

751. Do you consider it necessary for the security of the public that there should be a resident watchman attached to every reservoir?—No, I think certainly not.

752. To any of them?—None except those which are in a state of danger and require repair. A reservoir once properly completed is as secure as the ground.

753. If a reservoir is not constructed perfectly secure, is it not proper for the public safety, that there be a resident watchman in its immediate neighbourhood?—Certainly, and until it is put into a state of perfect security, just as in the case of a slip or any casualty on a railway, it is put under constant and close surveillance until the remedy is applied.

754. Mr. *Hibbert.*] Would it be possible to make use of the electric telegraph to give notice of any insecurity of a reservoir?—I think it is better to assume that embankments ought to be made complete or made absolutely secure, and to require no provision of that kind, than to depend on such a provision as that; there ought to be, as far as human foresight and experience can do it, no doubt about a reservoir or an embankment being secure.

Veneris, 26° *die Maii*, 1865.

MEMBERS PRESENT:

Mr. Ferrand.
Mr. William Edward Forster.
Mr. Milner Gibson.
Lord Richard Grosvenor.
Mr. Hibbert.
Mr. Kendall.
Sir John Ogilvy.
Mr. Roebuck.
Mr. Smollett.
Mr. John Tollemache.
Mr. Dawson Damer.

JOHN ARTHUR ROEBUCK, Esq., IN THE CHAIR.

Mr. JOHN ROBINSON M'CLEAN, called in; and Examined.

Mr. *J. R. M'Clean.*

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755. *Chairman.*] You are a Civil Engineer?—Yes.

756. And at the present moment you are President of the Institution of Civil Engineers?—Yes.

757. Have you had large experience in the construction of reservoirs?—I have; I executed the reservoir of the Staffordshire and Worcester Canal, South Staffordshire Waterworks, Barrow Waterworks, and I am now constructing a very large reservoir, for containing 130,000,000 gallons, near Ulverstone.

758. No doubt you have read the Bill into which the Committee are appointed to inquire?—I have.

759. Do you approve generally of the provisions of that Bill?—Generally. The only objection I have to make is to the last clause: "The undertakers of waterworks shall be liable to make good to owners, lessees, and occupiers of lands, and all other persons, all damage of what nature or kind soever, as well immediate as consequential, incurred by such owners, lessees, or occupiers, or other persons, by reason or in consequence of the giving way or failure of any reservoir, embankment, or other work of the undertakers, constructed otherwise than under the authority of an Act of Parliament passed in the present or any previous Session."

760. Have you any additions to propose to the Bill, or have you thought over the question whether, by any legislative enactment, further protection for the safety of the public can be insured?—I have not any additions to propose.

761. In the waterworks you are now constructing I suppose you follow all the latest improvements of engineering science?—Yes.

762. In saying that, do you include the making in the centre of the embankment a puddle wall?—No; I have very seldom adopted the puddle wall in the centre, without having a puddle also on the face of the slope, to prevent the water getting into the embankment. In many cases it is absolutely necessary to put up an upright puddle wall, going into a foundation of rock; but in all cases I put a puddle facing on the inner slope.

763. Were you present when Sir Arthur Cotton gave his evidence?—I was not.

764. Are you aware that in India embankments are never made with a puddle wall?—I am not aware of it.

765. I suppose you know they have large experience in embankments?—Yes; the reservoirs are filled very rapidly.

766. Would you not think that people like the Indians, with almost thousands of years of experience, might have learned how to make an embankment?—I have no doubt they have.

767. Are you aware that one of their rules is not to make a puddle wall?—I do not think that any general rule would be of much value; in many cases, it is absolutely necessary to make a puddle wall.

768. So that if under all the various circumstances of the reservoirs of India they have not made a puddle wall, you think that is no evidence of the non-necessity of the puddle wall?—Quite so; the circumstances cannot be similar.

769. Do you not think a ravine in India is very much like a ravine in England?—It depends altogether on the geological formation.

770. Is not the geological formation of India very much similar in many cases to the geological formation of similar places in Europe?—It may be so. I do not know where the reservoirs are placed to which Sir Arthur Cotton referred.

771. The reservoirs over the whole Peninsula of India, I suppose would include all the various sorts of geological differences?—Yes.

772. And if, nevertheless, they adhere to their simple plan of merely throwing down earth, and having no puddle wall, you still do not think that is any evidence of the wisdom of such a proceeding?—It may be evidence of the goodness of the material of which they construct the bank, but certainly not beyond that; I have known puddle walls in reservoirs exist in this country now for upwards of 100 years, 80 years, and 70 years, and the reservoirs are as good as they were on the day on which they were constructed. I am the consulting engineer of the Birmingham Canal, where there are very large reservoirs, and they were all made with puddle walls by the late Mr. Telford, and several other distinguished hydraulic engineers.

773. That experience, I suppose, in your judgment, would be very small as compared with the experience of a reservoir built in the second century

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century of the Christian era?—It would; but it would be quite sufficient to prove the correctness of the method of construction.

774. But if it was built without a puddle wall, and lasted from the second century to the present time, and only broke down from some extraordinary flood of water, should you say that was evidence that in that situation at least no puddle wall was required?—I should, and in many cases, where the material of the bank is altogether clay, no puddle wall is required.

775. I think you were employed by the Corporation of Sheffield to inspect the Bradfield reservoir?—I was.

776. And you presented two reports to them?—Yes.

777. Have you seen reason at all to alter your opinion since you sent in your report?—I have not.

778. What is your present opinion as to the mode in which that embankment was constructed?—I think the bank was well constructed up to a certain height, and that if the water had not got above the puddle there would have been no bursting of the reservoir.

779. Was the puddle then not carried to the top of the embankment?—I believe not, according to the evidence I heard.

780. Would it have been safer if it had been carried to the top of the embankment?—I believe so, in all cases.

781. Therefore, its not being carried to the top of the embankment was an omission?—That is a matter of opinion. I am of opinion that it was an omission, but I have known many cases where it is not carried to the top.

782. Is it not your opinion that it ought to have been carried to the top rather strengthened by the accident that took place?—Yes; I have no doubt the water rose in the reservoir to a higher level than it was intended to rise by the engineer.

783. Could any precautions have been taken to prevent that rise of the water?—By the weir having been allowed to act freely.

784. Do you think the weir was not large enough for its purpose?—I believe, at the time this flood took place the weir was not large enough on account of clay having been placed on the top. This clay was subsequently removed after the water rose to a considerable height, and the weir was not then sufficient to carry off the water that had risen during the time the clay was on the top of the weir and the subsequent flood water.

785. So far there was an error in the construction of the embankment?—There was an error in putting clay on the weir.

786. Was the canal for letting off the water large enough?—I believe it was, if it had been allowed to act in proper time.

787. Then, it not being allowed to act in proper time was an error?—Clearly, putting clay on the top of the weir was an error.

788. Then, whoever did that, in your opinion, contributed very much to the catastrophe which took place?—Yes, and I consider that he could not have foreseen the storm and flood that took place, or he would not have done it.

789. Do you think that any mode of inspection would have prevented the mischief?—I think not, unless the inspector had been there on the very day the accident occurred.

790. Supposing the inspector had inspected the embankment during its formation, and that when the puddle wall had arrived at a particular height, and it was proposed not to go higher, the inspector had said, "Yes, for safety sake I think you had better go higher," would there have been any crime in such a proceeding?—No crime, certainly.

791. Do you think that would have removed any responsibility from anybody?—I think that in all cases where there is inspection the inspector ought to be responsible for the work, and not the engineer.

792. Is that the case in railways?—It is, to a certain extent.

793. To what extent?—You cannot open a line of railway until you have complied with certain regulations of the Board of Trade; but subsequently you are at liberty to make whatever alterations you please.

794. Supposing that A. B. had constructed a railway, and that it had been inspected, and stated by the inspector to be safe, and ten days after it was opened, and an accident had happened, would the builder or the inspector be responsible for that accident?—No doubt the builder would be legally responsible; but the inspector would be morally responsible.

795. But still that moral responsibility is now incurred?—It is.

796. Do you think it beneficial to the public?—I have never known it beneficial.

797. Then you think the inspection of railways is futile, and of no use?—I think that the engineer, who is the responsible servant of the company, is always so desirous of doing everything that is right, that there is no necessity for any Government interference.

798. Then you fancy that, in all cases, all engineers will do their duty?—I do; and that has been my experience.

799. And therefore that any propping up of their virtue is not required?—Lessening the responsibility is not required.

800. Have you formed in your own mind any idea of the cause of the accident at Bradfield?—I have.

801. What, in your opinion, was the cause?—The water getting over the puddle, and carrying away the bank at the outside.

802. You do not agree in that theory which suggests that it was caused by a land slip?—I do not. I could see no trace of one, and the pipes which passed at a great depth underneath the embankment being at work after the water had risen so high, showed that the whole of that bank must have been in a perfectly sound state, and the pipe unbroken.

803. Then you think that the whole fabric of the land slip theory vanishes like the fabric of the Bradfield reservoir?—I have not considered the matter more than when I examined the place, and then I could find no trace of it.

804. Did you look at the land about there?—I looked at it everywhere, and I could find no trace of it, no lengthening of the pipes, and no pushing forward the sluice house.

805. Do you think the site was properly chosen for the embankment?—It appeared to me admirably chosen.

806. Then the mischief in your opinion did not at all arise from any fault in the site?—I do not think it did; I believe it was entirely owing to the water flowing over the top of the puddle which must have been insecure at some place, and getting

getting at the outside of the puddle, and through the embankment thereby causing it to slip.

807. Does not that statement rather inculpate the engineer who formed the embankment?—I think not. The water was allowed to rise to a greater height than had ever been anticipated.

808. Were there any means of preventing it?—The weir, if it had not been raised, would have prevented it.

809. That the man who put the clay in the weir was the cause of the accident?—In my opinion, as I have already stated, that was the whole cause.

810. Do you think any Government inspection would have prevented that cause of mischief?—I think not; people are desirous of getting as much water as possible during floods, either in canals or reservoirs, and are often induced to raise the weir for that purpose; I have known it done myself.

811. You think that a Government Inspector would not prevent their carrying that intention into effect?—No; unless he was always on the spot.

812. What do you mean by always being on the spot?—During floods, if you are anxious to get a large supply of water, you naturally put in a plank, or raise the weir slightly, believing that no accident will occur from it; in very calm weather it may be done without the least danger; but not during such a flood with the wind down the reservoir, as occurred at this fatal accident at Sheffield.

813. I believe at the bottom of the embankment there were two pipes to let off the water?—Yes.

814. Do you think that a wise proceeding?—Yes, it is a very customary one.

815. To put simple pipes and a trench; and the outlet of those pipes to be shut up on the outside of the embankment and not the inside?—Of course I prefer having valves on the inside as well; Mr. Telford always put them on the inside, but I do not see any necessity for placing them on the inside.

816. Mr. *Dawson Damer.*] Do they not rather help the undermining when they are put so low?—Not at all; you always carry an apron outside the outlet for some distance until the water gets properly regulated to flow off without the velocity being so great as to undermine.

817. *Chairman.*] I believe, in point of fact, those pipes did not at all contribute to the catastrophe?—I do not believe they did in the slightest degree, and I think their acting so well previous to the accident, shows how good the workmanship had been.

818. An opinion was expressed the other day by Mr. Fowler, that the wisest way of using pipes to let off water was to place them in a stone arch, so that you might inspect the pipes and send a man up the arch; do you think that is a safer mode of proceeding?—No; you might just as well inspect the puddle; you look on the pipes when once you have placed them as being as secure as any part of the puddle of the reservoir, and that they never require inspection.

819. Then you think there was nothing to find fault with in the mode of placing those pipes, and that the pipes did not at all contribute to the catastrophe?—That is the opinion I have formed, and I have no reason to change it, after reading the reports of the other engineers who examined it. The same mode of construction has been adopted by Mr. Telford, by the late Mr. Rennie, by Smeaton, and by all the English engineers during the last century.

820. There was no leakage through the pipes, or about the pipes?—So far as I could ascertain from people on the spot there was none whatever.

821. To recur back to your former statement, why should you say, that parties who make an embankment of that sort, and the embankment breaking, should not be liable?—It depends on the mode in which the embankments have been made, and the cause of the breach.

822. Even in this case, the breach was made, on your statement, in consequence of an error committed respecting the weir; in that case, would you not have made the company liable?—It may have been done by an ignorant workman; and, in my own mind, I have no doubt that it was. An engineer would not have done it during a flood with such a storm.

823. I suppose you know that by Lord Campbell's Act, that if a workman on a railway causes an accident the company is liable?—I am aware of it, if there is neglect.

824. Do not you agree in the policy of that law?—I never have objected to Lord Campbell's Act, although I have had to pay very severely under it on several occasions.

825. Why should not the policy of that Act be applied to reservoirs?—You mean as regards the construction of reservoirs?

826. Yes?—I cannot exactly say; I have not thought sufficiently about the application to give an opinion.

827. You have really no further suggestion to make to the Committee for the improvement of the law as it at present stands under this Bill?—None, except on the last clause.

828. And upon that last clause you cannot give any reason for your opinion?—Yes. It is dealing with a class of reservoirs which have been already made throughout the country, and legislating entirely in favour of the parties injured, and entirely against the undertakers of the work. In many cases embankments of reservoirs have been formed over mining districts, and it has been in dispute up to the present time who is liable, or which party is injured; whether the miner for allowing water to pass out of the reservoir into his pit, or the parties to whom the reservoir belongs for having placed the water in it, having first acquired possession of the land. In the event of leakage, the last clause of the Bill would settle it in favour of the mine-owner, which I think would be in many cases unfair.

829. Here your objection only refers to reservoirs made in past times?—Quite so. I do not at all object to the other parts of the Bill.

830. You do not object to the future operation of that clause?—No. I do not see anything injurious in it. There are many clauses in the Bill which would be very advantageous.

831. Mr. *Kendall.*] Did you hear Mr. Hawksley's evidence?—No.

832. Have you read it?—I have not read any of the evidence.

833. His evidence went to this: that a land slip did press on some shale, and that the shale pressed on the puddle bank and destroyed it, and that that was the cause of the mischief. What was the state of the reservoir when you inspected it; was the water all out?—Yes; at least, very nearly

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nearly all out; I could not get down to the outfall pipe.

834. Could you see enough to enable you to offer an opinion upon, whether or not there had been pressure by some shale on the puddle bank, so as to destroy it?—No; my attention was not called to the circumstance you mention.

835. As far as your opinion goes, it did not arise from that?—That is my opinion.

836. You did not see enough to enable you to form a decided opinion on that point?—Not on that point.

837. Then the failure you attribute entirely to this fact, that the puddle bank was not carried so high as the water sometimes reached?—As the water reached on that occasion.

838. There was a water escape provided?—There was.

839. But that water escape was clogged up by clay?—So I was told on the spot, and I saw it in some evidence that was sent to me by the Sheffield Corporation. The remains of the puddle were there.

840. Could you judge from what you saw that it had been originally clogged up, and that the water escape was narrow?—I could not, unless my attention had been called to it by one of the workmen on the ground at the time.

841. Do you give evidence from what you heard from him, or from what you saw?—I saw traces of a puddle. My evidence is based on this statement, and upon some evidence which was sent to me by the clerk of the Sheffield Corporation.

842. Then you felt you could offer an opinion from your own knowledge that the great mistake was in having clayed up this place where there was a water escape?—During the time of the severe storm and flood.

843. Do not you think that if a Government inspector had come there from time to time, and had been aware of the fact that the puddle bank was clayed up to a certain point, and that there was not relief enough in case of a great waterfall, he would at once have seen the error of this claying up of the waterway?—He never could anticipate that the weir would have been clayed up on such an occasion.

844. Do you mean to say that the weir was ever clayed up by the extra quantity of water?—This is the first time it was ever charged to this height; it is the first time the puddle of the bank had ever been tested, and a very unfortunate testing it was.

845. What evidence have you that the power of the reservoir was tested at that time?—I heard generally on the spot that it never was so full as on that occasion. If an inspector had been there on that occasion of filling the reservoir, no doubt that the first moment he found leakage he would have called the attention of the engineer to it.

846. If a Government inspector had been there at the very moment the reservoir was being tested, would he have permitted the testing to have gone beyond the puddle trench?—If he had been there no doubt he would not, and a careful engineer would not if he had been there.

847. Mr. *J. Tollemache.*] You have stated that if the soil would admit of it you would not recommend a puddle wall?—I prefer in all cases to have the puddle on the inner slopes.

848. Not a perpendicular puddle?—No.

849. Does it tend to weaken the embankment at all?—No; it does not tend to weaken the embankment, but it prevents the beneficial operation of the flat slope inside the bank. The water acts upon the slope of the bank at right angles, and the pressure of the water falls everywhere within the base of the embankment. If the face of the slope is not puddled, the water penetrates through the material of the embankment, and the pressure of the water acts at right angles to the vertical puddle wall, and the direction of the force falls outside the base of the embankment, so that in all cases I have adopted the precaution of puddling the face of the slope.

850. What was the size of the sluice pipes of the Bradfield reservoir?—Eighteen inches.

851. Were they sufficiently large for a reservoir of that size?—It depends on the purpose. During floods the weir ought always to be sufficient to take away the water, and pipes ought only to be used to work the reservoir.

852. If there is a very extraordinary flood, might the sluice be used, as well as the byewash, to reduce the water?—I do not believe the engineer ever intended them for the purpose, and I have never known those pipes used for that purpose in any reservoir.

853. Did you examine the byewash yourself? I did.

854. From the appearance of the byewash, do you believe that any large body of water would flow through it; did you see chips and stones lying about that would be washed away, supposing there had been any large quantity of water?—My attention was not called to that at the time.

855. Did you hear from others, when you examined it, that the water had broken over the embankment and washed away the soil which supported the clay wall from behind?—I read all the evidence which was given before the engineers who were sent down by Sir George Grey.

856. Do you think the cause of the accident was, that there was a great deal of wind breaking over the wall, and washing away the soil behind the clay wall, and that in consequence the wall was weakened?—That is my opinion.

857. Did you hear of the crack which was seen in the first instance?—I read that in the evidence at the time the inquiry was going on.

858. If the wall had been weakened by the waves breaking over it, would not that be rather a gradual process?—No; if the water once got over the clay puddle, the outer part of the bank would stand but a very short time.

859. Was the outer part of the bank paved so as to prevent an accident of that kind occurring?—No; the inner part was paved.

860. Could not the possibility of the waves breaking over the embankment have been foreseen?—It certainly never was intended that the water should rise to the height that the waves would pass over that bank, or within several feet of the top of it.

861. Therefore, in fact, there was more water in the reservoir than the engineer ever intended it should hold?—More water and wave than he ever intended it should hold.

862. Surely if a Government engineer had been appointed he would have been there when the bank was fully tested, and had he been there this accident would not have occurred?—This might have been his first experience. I have never known a storm and flood occur in the same way, and right down the centre of the reservoir and at right angles to the bank.

863. If

863. If a gentleman of sufficient experience were appointed as a Government inspector when there was so much rain, and they were going to test the embankment, surely one of the first things he would have done would have been to see that the byewash was clear?—No doubt that would have been his duty; but even a Government inspector could scarcely have anticipated such a flood and storm as took place on this occasion, and led to the disastrous result.

864. This was the first time the reservoir had been thoroughly filled?—Yes, and it was a very large reservoir.

865. In all probability would not a Government inspector have been present on the filling of the reservoir for the first time?—Very likely he would.

866. If he had been there he could not have done otherwise than have examined the byewash?—Yes; and the byewash would have been sufficient, if not raised by clay.

867. If a Government inspector had been present, do you believe the clay would have been there?—I do not believe it would.

868. Do you believe that the man in charge of the works would have left the clay there if he had known that the Government inspector was likely to be on the spot?—I do not think he would; and I do not think he would have had the clay there if he had known that a great flood and storm were coming on.

869. You are of opinion, that if there had been a Government inspector, in all probability, he would have been there when the reservoir was filled for the first time, and that if he had been there this clay would not have been allowed to block up the byewash, and therefore the accident would not have occurred?—That might have been so; but I doubt very much whether a Government inspector would have been there during a storm and rain.

870. Do not you think that the first thing a Government Inspector would have done, when he saw a great flood coming on, would have been to have examined the byewash?—I think it would have been.

871. Do not you think that in all probability the Government Inspector would have examined the byewash?—I think it is very probable he would.

872. And, therefore, in all probability, if there had been a Government Inspector, the accident would not have occurred?—Conceding all those conditions, it might not have occurred.

873. It is assuming nothing unreasonable?—No.

874. It is all probable?—Yes, but it is equally probable that the engineer would have seen to it himself if he had been there.

875. *Chairman.*] But the engineer did not see to it?—No, he was not there.

876. Mr. *W. E. Forster.*] What was the object of the clay stank?—I believe to test the reservoir to the fullest extent, and I cannot understand it in any other way; or it may have been the height to which it was intended to make the permanent weir of the reservoir.

877. Will you explain exactly what it was?—The weir is brought up in stone to a certain height. The byewash communicates with it; and I understand from the evidence that clay had been put on the top of the stonework of the weir on the day of the filling, evidently to raise the water as high as possible in the reservoir; if the water had been perfectly still, no danger might have resulted from that mode of testing by putting on a greater pressure than the reservoir was permanently to bear. It is the same as you test water-pipes by putting on a pressure of 300 or 400 feet when they are not to bear a pressure of more than 100 feet.

878. Then this clay would not have remained?—No.

879. It was not intended to remain?—I cannot tell the intention of the parties, but it was not any part of the permanent work of the reservoir.

880. You state in your report that you are of opinion "that the failure of the embankment was in consequence of the stone weir having been raised by a clay stank to a level higher than that provided in the designs of the work." Do you consider that any Government inspector who went there to certify whether this reservoir could be filled with safety would have been entirely neglecting his duty if he had not asked to look at the designs of the work?—I do not know exactly. The designs of works are not generally submitted to the Government inspectors of railways. They only come to examine the work after it has been completed.

881. Do not you think that the Government inspector would have a right to find out whether the work had been executed in accordance with the orders of the engineer?—Undoubtedly.

882. Then the Government inspector would have found out that this clay stank was, as you say raised to a level higher than that which was provided in the designs of the work?—If he had been there on that day he would.

883. If he had seen the clay he would have found that out?—Yes; and no doubt if the weather had been calm he would have consented to it for the purpose of testing the reservoir to a greater height than the permanent level of the water.

884. I suppose it so happened that the first time this reservoir was tested was in stormy weather?—That is so.

885. Surely, you do not mean the Committee to understand that any Government inspector who was sent down to test a reservoir would go away because it was raining, and not stand by to see it tested?—No; but the difficulty I referred to was getting an inspector there during a flood.

886. I understood you in a previous answer to state that you thought he would have gone away on account of the storm?—I do not think he would have gone away, knowing that the weir had been raised by clay; but it would be almost impossible to get a Government inspector there during the time of such a flood as occurred on that occasion; you could not telegraph for him, and you could not get him down in any way.

887. Do not you think that the Government inspector would have seen that the existence of this clay on the top of the weir made it dangerous for the reservoir to be filled during a flood?—I believe he would if he had been there at the moment and had seen the storm.

888. If he knew his duty as an engineer, would he not be aware that the clay stank would be a cause of danger in case it remained there during the storm?—He would.

889. Then, do not you suppose that the Government inspector would have told the engineer that the clay stank ought to be removed?—

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moved?—I believe he would, if he had anticipated a storm.

890. There is no danger, I suppose, to reservoirs, except during storms?—Or from bad workmanship.

891. Would not the object of the Government inspector going down be to guard against danger?—To see that all the work was right.

892. Then, do you suppose that if he had thought this clay stank would be a cause of danger at the time of a storm, he would have felt it his duty to say that cause of danger must be removed?—No doubt of it if he had been there.

893. Then your evidence means this; that if the Government inspector had gone down to inspect this reservoir before it was filled, if he had been competent he would have given directions which, in your opinion, would have prevented the accident and the loss of life?—Yes, if the clay had been on the spot at the time, and during the flood and storm which tested the reservoir for the first time.

894. If he had found the clay there?—If he had found the clay there, he would have said: "This is not any part of the permanent work and why is it here"; and the engineer would have said, 'I want to test the puddle higher than the permanent work"; and no doubt he would have agreed to it, and thought it was the duty of the engineer to do so, if the weather had been calm.

895. You are strongly of opinion that a landslip had nothing to do with this business?—So far as I could judge, I am.

896. Do you think if there had been the means of letting down the level of the water in that reservoir by byewashes, so as to reduce it two yards, that would have prevented the reservoir bursting?—I think it would.

897. I want to bring your attention to the fact that we have had contrary evidence from two competent witnesses on that point, both of whom have inspected the reservoir. Sir Arthur Cotton was asked this question: "In the case of the Bradfield reservoir, if the water could have been let down a couple of yards do you think there would have been any danger;" and he replied, "very likely not." Mr. Fowler was asked, "are you clearly of opinion that Sir Arthur Cotton was wrong in assuming that it would have been possible by byewashes put by the side of that reservoir to have delayed the destructive flood one hour?" and he replied, "entirely wrong, because the destruction of the bank from the flood was an instantaneous work; the bursting of the bank and the releasing of the water was a question of a few minutes." Which of those two answers do you agree with?—I believe that the answers are quite consistent. If there had been a byewash, such as that which was described by Sir Arthur Cotton, the gates might have been opened previously to the water rising to the level, it did.

898. Mr. Fowler's answer was understood by the Committee to mean this, that letting down the reservoir a yard or two would have been no good, because the cause of the accident was a slip of land against the bottom of the reservoir. What I ask you is this: do you consider that if there had been byewashes of sufficient size to lower that water a yard or two in a very short space of time the effects of the bursting of the reservoir would have been very much diminished?—On my theory, it would, entirely; and on the theory of a slip it might not.

899. It appears that upon the cause of this very destructive accident there is great difference of opinion amongst engineers?—It appears so.

900. Do not you think that their being that difference of opinion, and the danger of loss of life being so great, it is necessary that some precautions should be taken to guard against such danger, on the supposition that either of them may be right, and that it is impossible to say which is right?—Every danger ought to be gaurded against as much as possible.

901. Then do you not think it would be the business of a Government inspector, before he certified that the reservoir was safe, to have provided that the byewashes should be of sufficient size to let down the level of the water in the time that Sir Arthur Cotton says would have prevented the accident?—In this particular case it would, but there is no occasion for any other mode of construction than that of the reservoir which existed.

902. You consider that the byewash was sufficiently large?—I do.

903. Then why was it not made use of?—I have stated that the clay was put on and prevented its being properly used.

904. If it had not been for that clay, you think the byewash would have carried off the water?—I think the reservoir would not have burst.

905. I understand you to say that you find no fault with the pipes?—None.

906. Was it or not the fact that access to the pipes was easy?—It was not easy.

907. How could those pipes have been got at to be examined?—They could not have been got at unless the water was out of the reservoir.

908. How long would you expect that iron pipes would remain uninjured?—For ever; as long as the puddle.

909. Sir Arthur Cotton was asked this question: "Was there or not almost a certainty that at some time or another those iron pipes would get out of repair," to which he replied, "Yes, they might decay;" again, he was asked, "Then it was almost a question of time whether those pipes would be incapable to carry the water," and he replied, "That is one thing;" you do not agree with that?—No; if the pipes are made sufficiently thick, I believe they will last for ever.

910. And there is no fear of their getting stopped up?—There ought not to be.

911. Or getting rusty?—The outer surface is not exposed to the air; the pipes are surrounded by puddle, and the inside is full of water, so that I believe they would last for ever.

912. Do not you imagine that those whose business it was to look after this reservoir became aware of the existence of this clay?—I am not aware of it.

913. At any rate, no steps were taken to remove it?—One man gave evidence that he ran immediately and removed the clay from the top of the weir.

914. At what time?—I think it was after seven o'clock.

915. When did the reservoir burst?—I do not remember. I was not aware that I should be asked any questions on this subject, or I should have come better prepared.

916. Did any one assist the man in this work?—I do

—I do not recollect the circumstances sufficiently, but I remember his evidence was that the first thing he did was to run across from the house at the end of the dam and remove the clay from the top of the weir, at the same time the other man went down to open the pipes. The two operations appear to have taken place simultaneously.

917. Who was the superintendent of these men, while this was going on?—I do not know; I merely went down to examine it on the part of the Corporation.

918. What was the peculiarity in the storm?—That the action of the wind was at right angles to the embankment, and, I believe, an unprecedented flood came down.

919. In what direction was the wind blowing?—I do not remember the locality sufficiently to be able to answer that question, but it was at right angles to the embankment coming down the whole length of the reservoir.

920. You have stated that you object to the eighth clause of the Bill, because it gives compensation in damages from the undertakers of waterworks?—It is a kind of *ex post facto* legislation, which I think is altogether injurious to some parties.

921. Is it not the case that in most of the Acts relating to waterworks there is already some such clause?—Not that I am aware of.

922. Do you think that the right to keep up a reservoir, which may cause the destruction of life, is a vested right which ought not to be interfered with?—I should not at all object to an inspector going down and examining the different reservoirs in England, and seeing that they were all in a perfect state as regarded the works, but I should not like anything to interfere with the responsibility of the engineer until after the opening.

923. You are of opinion that the persons who have erected reservoirs, and derived advantage from them, ought not to be responsible for damage, unless that responsibility was defined when they first made the works?—Reservoirs have been made without any plans deposited, or without the authority of any Act, and the undertakers ought not to be liable in such cases, except for what they are liable at present under the common law.

924. Then, in the case of a reservoir being in a dangerous state, what remedy would you propose?—I think that a power of inspection by the Board of Trade would be very excellent indeed for all reservoirs; I mean a power of permanent inspection, and not limited to the period of opening the reservoir, but of examining at any subsequent period. If any notice was given that parties considered the reservoir insecure, there ought to be some means (as in the Holmfirth clause) of inspection, whether a private reservoir or a public reservoir.

925. Were you connected with the Holmfirth reservoir at all?—No; I took great interest in the proceedings at the time.

926. Did you examine the Holmfirth reservoir?—Yes; I went over it at the time.

927. Was it not the case that the Holmfirth reservoir was not in a state of repair?—I believe that was the case.

928. Do not you imagine that any Government inspector, who had seen the Holmfirth reservoir before it burst, would have seen that it was not in a state of repair?—I believe that he would, and I think it would have been a very useful thing.

929. That is, again, a second case in which Government inspection would, in all probability, have prevented the accident?—Yes; I think the power of permanently inspecting such works very useful.

930. Then, you are of opinion that certainly in the Holmfirth reservoir, and probably in the Bradfield reservoir, Government inspection would have prevented the accidents?—I do not think my evidence leads to that.

931. You state that in the Holmfirth reservoir it might have prevented the accident?—It might.

932. You also state that, supposing a Government inspector had seen that clay, in the case of the Bradfield reservoir, he might have prevented the accident?—Yes, on that supposition.

933. My question was this: I understand that the result of your evidence is, that certainly in the Holmfirth reservoir, and probably in the Bradfield reservoir, Government inspection would have prevented the accident?—Yes, if he had been a properly qualified inspector.

934. Mr. *Smollett.*] At the time the storm and flood occurred, from which the accident happened at Sheffield, did not parties from the town assemble and see the danger?—I do not remember the evidence sufficiently to give a reply to that question.

935. If they did so assemble, could not steps have been taken to remove the clay from the weirs?—I believe the clay was removed immediately on notice having been given that danger was likely to occur.

936. Before the embankment burst?—At the time they went down to open the pipes. They crossed over the embankment, which shows that it could not have burst at that time.

937. And they did remove the clay?—So the evidence which I saw stated.

938. And still the reservoir burst?—Yes; it was too late. The weir then was unable to act properly.

939. Mr. *Ferrand.*] You would not expect to see a reservoir burst again in the same manner, and from the same cause as the Bradfield reservoir?—Of course, I should not expect it.

940. Then, is it your opinion that the bursting of the Bradfield reservoir is an exceptional case, or that the same cause of bursting might occur to any other reservoir?—If the puddle were not high enough, and the water rose over the puddle, I have no doubt that any reservoir would burst.

941. Then, in your opinion, the same accident might occur to any other reservoir, unless there were larger means of protection than existed at the Bradfield reservoir?—Without sufficient precautions.

942. Are the Committee to understand you to say, that the weir was not sufficient in size for a heavy fall of rain, or that it was only stopped by the clay?—It was not sufficient, after the removal of the clay, to take off both the flood water which accumulated up to that level, and the flood water which was then flowing into the reservoir.

943. Therefore, if there had been no clay, still the weir was not sufficient?—I believe it was sufficient, and the water would never have reached the height it did.

944. You think that the clay alone was the cause of the accident?—And the puddle wall not being high enough.

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945. You think that the embankment was not high enough?—The puddle in the embankment was not high enough to sustain the pressure of the water and the wave.

946. Are the Committee to understand you to state that although the embankment was high enough, the puddle bank was not high enough?—Quite so, for that pressure of water.

947. Do you suppose that a Government inspector would have allowed that reservoir to be filled with a puddle-bank not sufficiently high?—I believe that he would, if the water had been perfectly calm, and that he would have been glad of the opportunity of testing the puddle.

948. In the neighbourhood of the Sheffield hills, the weather is not always perfectly calm?—I believe not.

949. Do you recommend byewashes to all large hill reservoirs?--Certainly; the flood water ought always to be taken away, independently of any mechanical means.

950. Some reservoirs have what are called "waste pits?"—Yes.

951. Do you think that a waste-pit is sufficient without a byewash?—I do not think that anything ought to be substituted for a byewash; I think that the water ought to flow away quite independently of mechanical means of any kind.

952. Then, under those circumstances, would you recommend a byewash from the inlet of the reservoir, I mean at the top, where the stream comes into the reservoir, would you have a byewash constructed for stopping flood-water flowing into the reservoir, so as to put it entirely down in the side byewash?—That is the mode I adopt myself in the construction of large reservoirs.

953. Always?—Not always; it depends on the locality; in the one that I am constructing in the Furness district, near Ulverstone, I make the stream quite independent during floods.

954. Can you draw a sketch of it?—Yes. (*The Witness drew a sketch.*)

955. It is your opinion that reservoirs are more severely tested in floods and windy weather than in calm weather?—Undoubtedly; you have the wave in addition to the pressure of the water.

956. When they are tested by thunder-storms, it is generally done suddenly?—It is.

957. Without much warning?—Quite so.

958. Therefore, before a reservoir is considered complete and put into service, is it your opinion that provision should be made for storms of the severest kinds?—It is.

959. Do you consider that a reservoir should be considered as having been completed until it has been properly tested by flood and wind?—It must be complete before it can be tested.

960. How long do you consider that a reservoir should be tested before it is considered complete?—I cannot answer that question; sometimes these large reservoirs are not filled for many years; on the Birmingham canal there are reservoirs which are only occasionally filled with water up to the high water level.

961. Do you think it is necessary for an embankment to be tested for a few weeks before it is considered complete and used for its special purpose?—You cannot test it unless you have a supply of water, and that supply of water may not occur for years.

962. May it not be said, that in the north of England the reservoirs are filled in a very few weeks with a heavy fall of rain?—Yes, if they are not too large; but a reservoir like the Bradfield reservoir, which was intended for flood-water, may not be filled once in a year, or once in three years.

963. Cannot you state how long the Bradfield reservoir was in being filled?—It had been finished a considerable time before there was sufficient water to fill it up to the level of the puddle. This was the first flood.

964. In what month did it burst?--I think, March.

965. The reservoir had been filling during the winter?—Yes; but it filled very rapidly at last. It is just one of those contingencies which we do not provide against. If we had an equinoctial gale and a westerly wind on many parts of the western coasts of England, nothing could prevent places like Whitehaven and others being damaged to a greater extent even than Sheffield. So with the Thames; the sea-banks are not high enough to resist, under certain circumstances, storms and heavy tides.

966. Therefore, you consider that all reservoirs are sufficiently tested as to their strength and completion by gradually filling with water?—I think so; I think this is quite an exceptional case.

967. And you strongly disapprove of ignorant workmen being employed in the construction and repair of reservoirs?—They must be employed in their construction, but not to trifle with any of the weirs.

968. I mean without being under the control and direction of an engineer?—There are many works where the ganger, who is a very useful man, but not a highly educated man, is quite sufficient to take the control.

969. Supposing there was a leaky embankment, through some defect in the puddle wall, would you consider it right to leave the repair of that puddle wall in the hands of an ignorant workman?—I would not.

970. Do you suppose that a Government inspector would allow any thing of the kind?—I believe that he would not.

971. You have stated that you approve of the Bill, with the exception of the 8th clause?—Yes.

972. Do you know by whom the Bill was drawn?—I do not.

973. Do you consider that the Bill gives sufficient and efficient protection to the public against the bursting of reservoirs?—I think it is a very good Bill, as far as it goes.

974 Will you state what clauses in the Bill give protection to the public against the bursting of reservoirs?—It gives the means of preventing accidents, which is a great protection to the public. It enables them in case of accident to take materials to repair it, which they are not enabled to do at the present time.

975. Whom does it enable to do so?—The undertakers of the works.

976. In the Bill there are eight clauses, and seven of those clauses give powers to the undertakers, but I do not see any power whatever even to any local authority or to the public to interfere for their protection?—No; but giving power to the undertakers is protecting the public.

977. Is not the complaint at Sheffield against the undertakers?—I do not know about the complaint at all; I never heard anything about th t; and I have never gone into the question farther than examining the works and making a short report.

978. Is

978. Is it not a fact that although the Bradfield Reservoir has burst, the undertakers have escaped and the public have suffered?—I am not aware of that.

979. Has the engineer been called upon to repay any of the losses?—I have not heard, but I hope not.

980. The company has paid them by taxing the ratepayers of the borough of Sheffield?—I have not heard.

981. You do not know that?—No.

982. Why do you object to the 8th clause?—Because it places reservoirs, which are not under Parliamentary authority, differently from those that are under Parliamentary authority. It decides the question between the undertakers and the parties who are injured without any appeal. At the present time, there is an appeal to common law to settle the dispute between the parties; but this clause would settle it finally in favour of the party who alleges that he is injured, and almost without inquiry.

983. Is that your sole ground for objecting to it?—That is the only objection I have.

984. The clause says, "The undertakers of waterworks shall be liable to make good to owners, lessees, and occupiers of lands, and all other persons, all damage of what nature or kind soever." You state that the accident at Bradfield occurred through gross neglect in leaving clay in the byewash?—Owing to leaving clay in the byewash.

985. I suppose there are no means whatever of making good the loss of life?—None.

986. That being the case, do not you think that the public have a right to expect that a most stringent Act of Parliament should be passed for the protection of life?—Yes, if any Act of Parliament could protect it; but I think you might just as well say that we ought to have an Act of Parliament to prevent people being killed in the streets of London. It is always from accident or from some unforeseen cause that destruction of life takes place, and I do not believe that any legislation will prevent it.

987. Are you aware that Sir George Grey, in the last Session of Parliament, stated, in the House of Commons, that in all future Waterworks Bills, it was intended that a stringent clause should be inserted for the protection of life and property?—Yes, and quite right.

988. Can you point out in the Bill any stringent clause for the protection of life and property?—No; and I do not know how such a clause could be framed.

989. *Chairman.*] Mr. Hawksley, in his evidence, suggested that certain improvements might have been made in a particular case; and he was asked, "Could anything of that sort have been constructed at the Bradfield Waterworks?" and he said, "A much better thing than that was constructed at the Bradfield Waterworks; there was a large open weir, 60 feet wide, and that is there now." Then he was asked, "Was that weir employed on that occasion to let out the water?" He replied, "It could not be employed, because the water had not reached that point. The water was about six inches, if I remember right, below the weir at the time of the accident." That is entirely opposed to your evidence?—It is, as far as I could judge. I examined that particularly, and the water-mark and debris on the reservoir appeared to me to be higher than the weir.

990. Then he was asked: "Therefore the letting out of the water was not efficient, because it did not let out the water that was dangerous?" He stated, "It was not the water that was dangerous, it was the slip of the hill behind that was dangerous; there was no danger in the water itself." Then he was asked, "The water was the weight, and if you could have relieved the weight from the embankment, you would have taken away the danger?" Then he replies, "No, the very same thing would have happened as regards the injury to the embankment; but if the water had not been there it would not have run down the valley and occasioned all this destruction." Is that your view?—Mr. Hawksley is one of our highest authorities in these matters, and I have no doubt that he had reasons for the opinion he has given; but that is not the opinion I formed after an examination of the works.

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991. You have stated that in a reservoir which you are making, you puddled the inner face of the embankment?—I have always done so.

992. Do you think that is a greater precaution than paving the interior of the face?—In addition to paving to puddle underneath the paving.

993. You add paving to the puddling?—Yes.

994. Did you look at the angle at which the inner face was formed, and was that the proper angle?—It was sufficient.

995. You stated that you fancied there would be a difficulty in getting a Government inspector there when any great storm was coming on?—Yes, to test the reservoir.

996. But the testing of the reservoir in this case was the filling of the reservoir?—It was.

997. Was not that simultaneous with the storm?—It was the storm that caused the testing of the reservoir.

998. Then would it not have been said, "We are filling the reservoirs as fast as we can," and would not the Government inspector have been there to see the real testing, namely, the filling of the reservoir?—If he could have anticipated this great storm he might have done so, but that is almost impossible for a flood reservoir.

999. You think, then, that if the reservoir had been filled in calm weather there would have been no danger?—I believe not.

1000. A slip might have taken place in consequence of the rain?—You mean the slip referred to by Mr. Hawksley?

1001. Yes?—I did not see the slip.

1002. The slip would not have been occasioned by the wind?—No.

1003. Therefore there would have been no danger from mere wind, on Mr. Hawksley's view of the case; but the danger arose from the slip?—Quite so.

1004. Mr. *J. Tollemache.*] It has been stated to the Committee that this accident occurred from a landslip?—So I have heard.

1005. I suppose that a landslip which would produce such an effect upon an otherwise well-constructed embankment must have been of a very formidable kind?—I should think so.

1006. You were there and you examined the works?—Yes.

1007. Do you think it is possible that a landslip of that formidable kind could have occurred without you remarking it?—I think not; but that is only my own opinion.

1008. Could you see any signs of a landslip?—None; I saw nothing which could not be

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accounted for by the overflowing of the water from the bank.

1009. Mr. *W. E. Forster.*] Would it have been possible for the engineer who had the superintendence of the reservoir to have prevented its filling during the flood?—All that he could have done would have been to allow the weir to act. He had no control whatever over the water filling the reservoir; he could not have sent it in any other direction than through the reservoir.

1010. Would it have been possible for him to have prevented the reservoir being filled?—Certainly not, up to the height of the weir. He had no physical control over the filling of the reservoir. There was no bywash to send it off, independently of the reservoir.

1011. From your knowledge of the valleys, and the mode in which the wind blows down the valleys in the North of England, are you not aware, as a matter of fact, that it is very common indeed, especially in a storm of rain, that the wind blows down those valleys so as to come at right angles with any embankment which is made across them?—I have not sufficient experience of those valleys to enable me to give a proper answer.

1012. *Chairman.*] I want to ascertain from you whether you paid attention to the relative heights of the weir and the embankment?—As far as one could judge by the water mark which was left on the embankment and the level of the weir.

1013. Without any water mark you could have ascertained the height of the weir with reference to the height of the embankment?—I examined a section of the bank.

1014. Can you trust your memory to state how much the top of the weir was below the top of the embankment?—I cannot answer off-hand. If you wish it I will examine the section.

1015. Your strong impression is, that the water was above the weir, and above the embankment?—Not above the embankment, but above the puddle; it must have been above the puddle at the time the accident took place.

1016. You cannot tell the relative height of the puddle and the weir?—I cannot; but there was the wave in addition to the level of the water.

1017. I want merely to direct your attention to the height of the puddle and the height of the weir; was the weir, according to your recollection, not so high as the puddle?—According to my recollection, the weir was lower than the puddle; but I do not know to what extent.

Mr. Robert Rawlinson, called in; and Examined.

Mr. *R. Rawlinson.*

1018. *Chairman.*] You are a civil engineer?—I am.

1019. And you are now employed by the Government, are you not?—I have been, more or less since 1848.

1020. What position do you hold under the Government?—I am Chief Inspector of the Local Government Act Office, and I am Government Engineer of the Lancashire Works under the Public Works Act.

1021. You were employed as Commissioner deputed by the Secretary of State, to enquire into the catastrophe which occurred at the Bradfield Waterworks?—I was.

1022. Inspecting that embankment, and those waterworks, did you form a distinct opinion as to the cause which led to the catastrophe?—Yes, I have formed a distinct opinion. I have a very decided opinion as to the cause of the catastrophe.

1023. Did you report to the Government?—I did, and I hold a copy of the Report in my hand.

1024. And you have seen no reason to change the opinion which you expressed in that Report?—None.

1025. Will you explain to the Committee your idea of the cause of the catastrophe?—My idea of the cause of that catastrophe, from personal inspection is, that the line of outlet pipe laid at the bottom of that embankment, and the manner of making the embankment allowed the water to find its way down the inside face of the puddle wall to the external skin of the pipes, and that the water then established a creep through the puddle wall, and so escaped outward. That piece of putty which I now produce, may be taken to represent a portion of the puddle wall, and the quill which I insert into it, may be taken to represent one of the pipes laid in the puddle. Where those pipes crossed the puddle wall, there is 30 feet of compressible puddle, according to the evidence, which narrowed itself out for about on either side, until the pipes rested on three feet of puddle, which puddle rested on the rock; so that you had a great length of pipe resting unequally, and at this point you had 90 feet of the embankment over this line of pipes. The outer toe of the embankment had been made of selected rubble. The engineer stated in his evidence that he had paid an additional price per cube yard, to select the stones and to make the embankment on the outer toe of his reservoir, which was 50 feet at the apex. That involved two things, making a perfectly porous bank on the outside, and making a comparatively tight bank on the inside, by removing the stone. That was done to an elevation of 50 feet. He (the engineer) had then taken away also from the inside all the best material, and had selected it, and the top 50 feet of that bank is absolutely made of rubble; of what Mr. Stevenson and Mr. Leslie, of Edinburgh, very graphically described as similar to quarry rubbish, having no watertight bearing powers. Then the embankment, while it was being formed, had a top water conduit, which carried the water during the making of that bank, but in the beginning of the summer the top water conduit had broken down by a violent storm, which storm filled the reservoir 50 feet deep in one night, and the engineer never took power either to restore that top conduit or to draw off the water, but he went on completing his bank, and if I can use words strong enough, his conduct resembled a man playing with an airtrigger, because if that storm had repeated itself before he had finished his bank, it must have gone over the top. Those two 18-inch pipes could not have let off 1-20th of the incoming flood, and he had no other means of passing it, as his bywash was far above. My reason for believing that the probable cause of failure was along the line of pipes is this: up to 50 feet, we know the bank was tight, and the valves were kept sufficiently

ficiently open, and no violent storm occurred. Then the filling occurred again with a violent storm. A violent storm of rain came on; they had no top-water conduit to turn it out, and it filled the reservoir, gradually creeping up the inner slopes: the water never reached the masonry byewash, so as to flow over, and therefore the masonry byewash had nothing to do with the failure. The water got to a height within some six inches of the masonry embankment; and it was about six feet below top bank. The material forming the embankment above the first 50 feet, was mixed largely with rubble. I measured stone there that I could not lift, and there were hundreds of the size of my hat; water would, therefore penetrate such a bank to the puddle (*Pointing to a diagram the witness stated*). This is the puddle wall, and this is the outer slope; being rubble, all the strength depended on this puddle wall; the water would have a tendency to creep down the face of that puddle wall, and if it did so creep down, and found that line of pipes, no engineering power could have prevented the catastrophe. My impression is, that the water crept down the puddle wall, and found a cavity over the pipes, and then the effect would be, as I have sketched, to go through here, the outer rubble embankment offering no resistance, the escape would go on unobserved: it was a very wet day; everything was in flood; I had evidence that a great volume of water was seen to escape. At all events, all that happened really is conformable to this idea, because the next thing that took place was that the bank gradually subsides; it bent, until the top water got level with it: the wind was blowing down the reservoir, until, as Mr. Gunson said, water was over his shoes; he was positively in the middle of that bank with the water over his shoes; the bank having gone down six feet, he ran to the valve-house; some person got hold of him by the shoulder, and dragged him to the side of the hills, and he said, "I looked up, and it (the bank) had gone over." So porous was the bank, that the water did not flow down the surface, but dropped vertically, adding its weight to the mischief, and in 20 minutes something near to 90,000 cubic yards were down that valley. (*The witness explained his answer by referring to a Plan.*)

1026. I see by this plan that you lay the pipes, apparently, above the surface of the ground?—No.

1027. Were the pipes laid below the surface of the ground?—Yes; the rock was excavated. They were laid with 1 foot 6 inches of puddle underneath them, and 1 foot 6 inches on either side. In the centre the rock was scarfed away. I said to the engineer, "How did you cross your puddle-trench?" and I expected him to tell me one of three ways. I expected him to tell me that he had carried a concrete wall up from the bottom, so as to make it absolutely solid like the rest, or that he had sprung a relieving arch, so as to give an uniform bearing, or that he had put a bearing of timber. When he described to me that he had scarfed it out, I felt at once that no power on earth could save the bank, and that there was a trap made that nothing could escape from. My colleague, Mr. Beardmore, whispered to me, "I have no doubt now of what caused the catastrophe, and that relieves my mind from a great weight, because I see it very clearly." With regard to the landslip, there had been a surface slip at the point that has been named, over and over again, and the bank had been slewed round and got on solid ground; how any gentleman can come positively to the conclusion that there has been a landslip, I cannot tell. The embankment is, I believe, much in the same state that it was left. It is a mass of ruins; the supposed landslip is covered yards deep with the ruins of the bank. It is a most extraordinary landslip. If in the very deepest part of the bank that line of pipes remained, as the engineers acting for the company say they remained, totally uninjured, it must have been a very selecting, a very judicious sort of a landslip to do exactly what was wanted, and no more.

1028. From your mode of expression I assume that you fancy that the pipes do not remain in the position in which they were placed at first?—I am as absolutely certain as that I am sitting in this chair that nothing on earth could prevent those pipes subsiding in that 30 feet bed of puddle. I am certain that no man could have laid these pipes in that puddle, and have been sure as to what position they were in, unless he had taken accurate levels over them before he formed his bank, the moment he began to form his bank they were beyond his control, and he would know nothing about what would become of them, and all the so-called tests to prove the position of those pipes, in my opinion, are absolutely child's play. I am told, for instance, that the engineers plugged the ends up and tested them by hydraulic pressure, and found them absolutely tight and without leakage. If that is a fact, I do not deny it; they may be as tight as a glass bottle. Then they say that they sent a man through, and that he found nothing wrong. That may be a fact, also; I have nothing to say against that. Then they say that they took candles out to a given length, and placed them at intervals inside the pipes and then sighted them. If gentlemen of their reputation tell me that that is a test that those pipes have not moved, if it was not for indignation, I should only smile, for it is absolutely no test at all. When an engineer wants to know the accuracy of a piece of work he must have a fixed benchmark on which he places his level staff to begin with. To ascertain that those pipes have never moved there must have been a plotted section; the engineer must have taken from a fixed benchmark his levels at intervals, and he must have plotted a section. I I should say, to be truthful, the level staff must have been placed on every pipe joint; and then before he can tell me those pipes have not moved he must again have taken his benchmark, and have put his level staff on that line of pipes again at the same points, and shown me those two plotted sections; and no engineering jury in this world would receive as conclusive any other evidence. Putting lighted candles and plugging the ends up, or talking about such tests to prove that the pipes have not sunk in the puddle, is really child's play.

1029. Then, I conclude from your evidence that you think there were great engineering errors in the composition of that embankment?—It was an error, in my opinion, to lay those pipes at all, but to lay them in that manner was an error of the gravest possible character; for to scarfe that ground out so as to leave the contingency of a double line of pipes being allowed

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to sag or sink on that unequal depth of puddle was to ensure the certainty of their going down.

1030. In what way do you think by legislation that such an error as that could have been prevented or, if committed, the consequences of the error remedied?—As you are aware, my attention has necessarily been directed for some time to this matter. I have not only had to inspect the Sheffield Waterworks for Government, but since that period it has been my duty to inspect the reservoirs generally of the district of Yorkshire, and also to inspect reservoirs over a considerable area of Lancashire; I have also, as a practical engineer, been concerned in the construction of reservoirs and in engineering works generally since I was 21 years of age. I have drawn up, for the consideration of the Committee, some general rules which I propose to put in. I also put in a detailed analysis of the evidence of the engineers with regard to the landslip and the failure generally, and also of the reasons why I propose those rules. (*The witness delivered in same.*)

1031. It is the feeling of the Committee that we should not continue your examination until we have before us, in print, the rules which you have handed in; you will be enabled to come before the Committee again?—Yes.

Mr. John Murray, called in; and Examined.

Mr. *J. Murray.*

1032. *Chairman.*] You are a Civil Engineer?—I am.

1033. And you have been employed in the making of hydraulic works?—I have.

1034. Have you had large experience?—Upwards of 30 years.

1035. Have you seen the Bill which is before the Committee?—I saw it this morning.

1036. You have not seen it before?—No; I have not had time to study it.

1037. Were you employed by the Corporation of Sheffield to inspect the Bradfield Reservoir?—I was.

1038. You did inspect and report upon it?—Yes; I inspected it shortly after the disaster in March, and reported upon it in June and July 1864.

1039. Who was employed at the same time with you?—There were a number of other engineers; I did not meet any of them on the spot, except Sir John Rennie, who accompanied me to the scene of the disaster.

1040. Mr. *Smollett.*] How many days after the disaster had occurred?—About a week afterwards.

1041. *Chairman.*] You have formed an opinion as to the cause of that disaster?—I have.

1042. Will you state to the Committee what, in your opinion, was the cause of that disaster?—There were several points to be considered before I could make up my mind as to what had been the cause of the disaster. I may state generally that, looking at the Agden Embankment, then under construction, with the embankment which had failed; and being told, or having heard from the evidence before the coroner, that they were constructed alike, I saw in the Agden Embankment that the material was tipped by railway waggons in layers of about six feet and upwards, which I conceived in itself was an improper method of constructing a reservoir embankment. The clay puddle, which is carried up the centre of the embankment to its top, or nearly so, where it was four feet wide, with an inclination of an inch to a foot on each side, making it about 16 feet in width at the surface of the ground. It was intended only to have made the excavation nine feet deep below the natural surface for the reception of the clay puddle, but finding the ground below very soft, and an immense quantity of water pouring in upon them, they had to go down in some places in the centre of the valley to a depth of 60 feet, and to employ engine power and pumps to keep down the water. When they had reached the depth of 60 feet, the engineer, Mr. Leather, examined it, and approved of the puddle being put into the trench. That puddle, as it was brought up being impervious to water, would naturally carry all the impounded water up to the surface of the ground. As the embankment was carried on simultaneously with the central puddle wall, of course that water would rise up in the embankment and saturate the lower part of it, and make its escape into the reservoir, whilst the embankment on the lower side of the clay puddle wall would be free from water. The consequence would be, that one side of the embankment would become more quickly consolidated than the other, and cause a twisting and possibly a rupture in the puddle wall; and I have no doubt that the water did make its escape through some rupture of that kind.

1043. When you inspected the works you saw at the bottom of the embankment two pipes, did you not?—At the extreme outside I saw where the pipes had been placed, but the pipes were all covered with material.

1044. Then you could not judge whether that had contributed to the catastrophe?—No; the pipes were a little below the surface of the ground, and the lower part of the embankment still in existence.

1045. In your opinion was the site a good one for an embankment of that sort?—I think not; and had I been the engineer of such a work, on finding such a quantity of water in the trench, even on arriving at the depth of 60 feet, I should have had very great doubts about proceeding any further with the work; I should have brought the subject before the directors, in order that the site might have been changed, even after spending a certain sum of money upon it.

1046. Was the method in which the embankment was made the common method?—It was the common method of making a railway embankment, but not the method of making a reservoir embankment, or of canal banks.

1047. Will you explain to the Committee the difference between the two?—A railway embankment is generally done with the greatest possible expedition, and by railway waggons tipping, in the method which I have described as having been done at the Agden Embankment. In reservoir embankments of this nature, and especially of such great height as this was, it is done in layers; as the clay puddle is brought up, on each side of that clay puddle the material is selected, not made so compact as the puddle wall itself, but

but for three or four feet on each side it is done with great care, to prevent any such rupture as I have been speaking of; and the remainder of the embankment is done generally with dobbin carts or any other method, but spread probably 12 or 18 inches or two feet at a time, and not six feet, as was done in this instance.

1048. So that by that means it gradually settles down?—It gradually settles down, and the carts being led over it consolidates the mass.

1049. Do you fancy that the puddle wall being down the middle of the embankment, at all disturbs the equable settling down of the whole embankment?—No, I think not; I should prefer the puddle wall up the centre of the embankment.

1050. Did you hear the evidence of Sir Arthur Cotton?—No.

1051. He stated that in India there was no use of puddle walls, and that although embankments had been made many centuries, yet throughout the whole of their history the use of puddle wall, until the English rule, was never known?—It may be so; they may have lined the inside, as is frequently done in canal banks; canals are frequently lined in that way. But, generally, the preferable mode seems to be that the clay puddle in a canal is placed along the bottom and carried up the centre of the banks perpendicular.

1052. I conclude from what you have stated, that you fancy that the catastrophe arose from engineering error?—That is the purport of it. I think also that over the seat of the embankment, all the soft and compressible material, ought to have been dug out and thrown on one side, in order that the settlement of the bank should be as regular as possible; and the small quantity of peat or compressible material which I saw there, leads me to infer that had not been done throughout the embankment, but that only a small portion of the soft compressible material had been taken out, and that the whole seat of the embankment had not been removed.

1053. In the construction of an embankment like that, would there be any advantage from any sort of inspection during its construction?—It is the duty of the engineer to see that the contractor carries out his work properly.

1054. Do you think that for the safety of the public there ought to be any other inspection than that of the engineer employed by the company?—I think there ought.

1055. Do you think there is any power which ought to exercise that inspection except the Government?—I think the Government ought to do it, the Board of Trade.

1056. At what moment would you have the inspection begin?—I think that where the safety of the public is dependent upon embankments of so great a height to impound water, and which are so dangerous to all below them, the plans of the company before they are allowed to be carried out should be submitted to a public Board, that they might be all in some way in unison with each other; that is to say, that the embankment at its top should be of a certain breadth, that the puddle should be of a certain thickness; that the byewash should be of a certain length, and that a number of those leading features should be delineated upon the plans, and be submitted to a public Board. One engineer may think an embankment quite sufficient 10 feet wide, and another engineer may say that it ought to be 18 feet wide; and, therefore, I think that there should be some controlling power, in order that the country below may be in a safe position.

1057. Do you think there would be any danger to the public from relieving the engineer under such circumstances from any responsibility that he now lies under?—That is the only danger to be apprehended; I think something may clash in that way.

1058. Do you think that clashing, or any mischief that might arise, is so great as to overpower the benefit of inspection?—No, I think not; I think that inspection is necessary.

1059. Will you state to the Committee some portion of your experience with regard to any large reservoir?—I was a young man when the New River Company were constructing the large reservoirs at Newington; that was 24 feet high, in the deepest part, but it was through some nasty material, London clay; and great difficulty was experienced to keep the central puddle wall from being injured by the shipping and consolidation of the remainder of the banks. That is the only waterworks' reservoir that I have executed; but I have been consulted and partly designed the surrounding walls of the reservoirs at the New River Head and in Claremont-square, Pentonville, the latter containing a considerable depth of filtered water. My business has chiefly been connected with docks and harbours, as well as the improvement of rivers.

1060. As an engineer, you would say that a reservoir, of that sort having failed in that way, and considering the danger that is created to the public, there ought to be some means of letting off the surface water?—Certainly.

1061. Did you enquire when you were making your inspection of the Bradfield reservoir, whether there were sufficient means of letting off surface water?—I saw only a semicircular weir 64 feet in length, and about six feet, as nearly as I could judge, below the top of the embankment; and the whole of the water coming down the valley, if impounded suddenly in this reservoir, could only make its escape through two 18-inch pipes laid through the embankment until it reached the level of the weir. There were no means of preventing the water coming down the valley in a storm from filling the reservoir, until it arrived at the level of this weir; and if a rapid fall of rain were accompanied with wind coming down the valley, and creating waves, it would test the embankment very severely: I should say that as a protection, under such circumstances, to prevent water coming down suddenly into a reservoir of that kind, I should have previously constructed above the high-water level a conduit or drain cut in the valley on each side, with sluices thereon; so that I could have commanded the water, and all, or any portion, could have passed over the bye waters, and kept it entirely out of the reservoir.

1062. There was nothing of that sort in the Bradfield Reservoir?—There had been a conduit of that sort on one side, but it had been broken up some time before, and had not been repaired.

1063. Did that conduit exist before the accident?—It had been there during the construction of the embankment, but it had been ruptured or broken some time prior to the accident, and had not been repaired, and therefore it was no longer in action.

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1064. So that in fact there was nothing to lead off the surplus water, except this weir and the two pipes?—That is so.

1065. You think they were insufficient for the purpose?—I think the length of the weir was totally inadequate to take away a body of water from a storm coming down the valley; but when this embankment failed, the water had not arrived at the level of the weir.

1066. Then any notion that the catastrophe arose from the waves rushing over the top of the embankment is, in your opinion, a mistake?—That may have happened also. The waves may have been thrown up, and no doubt they were, on the surface of the embankment.

1067. Do you think that contributed to the catastrophe?—No doubt it did, although my opinion goes further. I say that I believe the puddle wall had been ruptured by the unequal settlement of the embankment.

1068. Then you think that rupture took place without the aid of the storm?—Yes; but, of course as the water rose in the reservoir it tested the embankment still more severely.

1069. In your inspection, did you look at the site sufficiently to ascertain whether there was anything like a landslip?—I could see nothing of the kind. There was a large mass of material below the gap, and therefore it was impossible to tell whether any landslip had taken place or not. I saw surface slips on one side of the valley, but they were nothing.

1070. They could not have produced the catastrophe?—Certainly not.

1071. Then supposing it should be said that the embankment was perfect of its sort, but unfortunately a landslip happened, disturbed the foundation of the embankment, twisted it out of its right position, and thereby made an orifice through which the water came, you would say that was an inaccurate statement of the facts?—I saw nothing to lead me to infer that, and I do not think any person could have come to such a conclusion from seeing the nature of the ground.

1072. When you say "any person," I suppose, *à fortiori*, not an instructed engineer?—Certainly not.

1073. Lord *R. Grosvenor.*] Is there any doubt that there had been landslips up and down the valley at different places?—There were surface slips.

1074. You think they would not have interfered with the embankment in any way?—Not to have caused the catastrophe.

1075. And therefore you think that embankment might have been at almost any spot in that valley 50 yards above, or 50 yards below?—No; I say that I would have had doubts about forming the embankment on the site chosen, after the puddle trench had been dug to so great a depth, and such difficulty encountered in keeping it free from water.

1076. Only with reference to the ground below?—With reference to the springs that came up into the puddle-trench.

1077. Not with reference to the landslip?—Before I designed such a work I should have had borings taken across the valley, to have ascertained clearly the nature of the strata on which I was going to put my embankment.

1078. You think, therefore, that in digging this trench for the puddle-wall, when the engineer, Mr. Leather, saw the quantity of water that was coming into the trench, it would have been more judicious on his part to have given up that site?—Yes, for one a little higher up. It would have been in a more contracted part of the valley, and likely to be more sound than where this embankment was placed; I think some 50 yards or 100 yards above the site of the Bradfield Embankment. It would have been less costly, and it would have consumed less material in that more contracted part; and, by raising it a little higher, they might have got the same quantity of water.

1079. In putting the puddle into this trench with the water in it, a certain quantity of water is required to make the puddle good?—Yes, a small quantity of water.

1080. Putting this clay into the trench gradually drove the water up?—The trench being cut in shale and in rock, the water poured through the fissures, and as the clay was brought up against those fissures, the water would naturally rise along with the puddle wall; and when it came to the surface of the ground the water would find its way into the inside of the reservoir; none could pass downwards to the outside, because it was intercepted by the clay puddle.

1081. You think this water was actually from land springs?—It could be only from land springs.

1082. You saw the iron pipes?—I did not see them; they were covered with the material of the embankment and the debris.

1083. Can you state whether those pipes were laid in the solid ground and then puddled, or whether they passed through the artificial bank?—I was informed that a trench was cut, in which those pipes were laid below the surface, and embedded and covered with clay puddle.

1084. And that they did not pass solely through the artificial bank?—They would rest on an artificial bed, inasmuch as clay puddle was below them.

1085. They were not entirely through the bank?—They went through the bank diagonally.

1086. *Chairman.*] And yet under the bank?—They went under the bank diagonally.

1087. Mr. *J. Tollemache.*] If this disaster was caused by a landslip, that landslip must have been of a very formidable kind?—Yes.

1088. Do you think it possible that a landslip of that formidable kind could have occurred without your seeing it?—I think there would have been symptoms of it.

1089. In short, you think there must have been symptoms of it?—I could arrive at no conclusion that there had been a landslip.

1090. You saw no appearance of a landslip?—None.

1091. I suppose if you did not see it no other person could see it?—I could not see it. I saw some surface slips.

1092. You believe that if this disaster had been caused by a landslip, that landslip must have been of a very formidable kind and must have been seen by yourself?—Yes.

1093. Mr. *W. E. Forster.*] Did you hear Mr. Rawlinson's evidence?—I heard a portion of it.

1094. In the main do you agree with him as to the cause of the accident?—No; I think Mr. Rawlinson thinks that the failure arose entirely from the pipes.

1095. You think the pipes had something to do with it?—I do not think they had so much to do

do with it as Mr. Rawlinson states. I think that the unequal settlement of the bank, caused a twisting of the clay puddle wall, and a rupture by the adhesion of the matter to the sides of it.

1096. Do you or not agree with him, that the pipes must have subsided a little, so as to leave some space for water to get through above?—It is possible; but I do not think it so much as Mr. Rawlinson.

1097. You heard Mr. Rawlinson state, that an engineering jury would say that the only means of testing the pipes would have been by levels?—Yes.

1098. Do you agree with him in that?—Yes.

1099. And that the tests which he said they had been exposed to, he thought were no tests at all?—I understand that the pipes had been plugged up, and subjected to hydraulic pressure, and that no water had escaped. That only proves that the joints had remained perfect, but it does not prove whether they had sunk.

1100. You heard what he said with regard to candles?—I do not understand what the candles were for.

1101. Did you hear Mr. M'Clean's evidence? I did.

1102. Do you agree with him that the clay stank, which he described had something to do with the accident?—I saw none, nor did I ever hear of clay being used, until I heard Mr. M'Clean mention it this morning; I saw the top of the weir, a portion of it where they had attempted to blast it, just before the accident took place. I saw no clay, nor did I hear of any.

1103. Supposing that it had been in the position he stated, do you think it would have been dangerous?—Any heightening of the weir would have increased the danger.

1104. *Chairman.*] I think you stated that the water never rose up to the weir?—We were given to understand that the water had never reached to the weir by six inches.

1105. Mr. *W. E. Forster.*] How did you ascertain that the water had not reached the top of the weir within six inches?—By the evidence before the coroner.

1106. Mr. *Smollett.*] In point of fact, you think that the pressure of the water was too great for the wall, and that it gave way?—No. I should have made the embankment wider at the top; I should have made it six feet on each side of the puddle wall, which I should have carried to the top of the embankment; the slopes also I should have preferred being at a greater inclination than they were; and in putting the clay puddle wall in its place, I should have put in the material on each side of that puddle wall, with great care, three or four feet in width on each side, in order to have prevented any likelihood of rupture, by the unequal settlement of the bank.

1107–10. *Chairman.*] I think the mode in which you described it was this: that the rupture of the puddle wall took place before the filling of the reservoir, and that the water then found a fault, which it fell into?—Yes.

1111. Mr. *Ferrand.*] You have stated that it is usual to clear away the soil; I suppose that is not always done?—It ought to be done.

1112. It is not always done?—In railway embankments, I believe not.

1113. In embankments for reservoirs?—It ought to be done in reservoir embankments.

1114. You disapprove of the material for an embankment being tipped out of railway waggons?—Yes.

1115. I believe that is usual?—Not in forming a reservoir embankment.

1116. It is done sometimes?—I am not aware of it. I know that Mr. Leslie, the engineer, of Edinburgh, is particularly strict in his specifications with regard to the method in which the material should be laid through the embankment, and in his specifications, he describes them to be done in curved layers.

1117. You recommend that no layers should be more than 18 inches thick?—I think they should not.

1118. Are you not aware that it is usual to make layers four feet or six feet thick?—Perfectly, in railway embankments.

1119. We are talking of reservoir embankments?—I totally disapprove of it.

1120. Did you hear Mr. Fowler give his evidence?—No.

1121. You are not aware that he does not disapprove of tipping the material for reservoir embankments out of waggons?—I do not know that.

1122. And that he is not particular as to the breadth of the layer?—I do not agree with him.

1123. Your opinion is, that a Government inspector should have the power, and should be employed to overhaul the works during the whole progress of making an embankment?—I think that the plans should be submitted to the Board of Trade. If they appoint an officer afterwards to inspect them before they are opened or tested during the construction of the works, I think it is quite right. They ought not to be filled with water until approved of by that officer.

1124. Are you aware that at the present time there is no power whatever to people living below any of those reservoirs which are to be made, of calling on the Government to interfere if they consider that the reservoir is not properly made, or will not be sufficiently secure?—They have no power, but they make application to the Government.

1125. Have you seen the Bill which is before the Committee?—I read it this morning.

1126. Are you aware that there is not the slightest power given in the Bill to any person or persons who may be at the present time living below a reservoir that is dangerous, or may hereafter be living below a reservoir that is to be made?—I am aware that there is none.

1127. Do you think this Bill sufficiently provides for the protection of life and property from reservoirs?—It does not.

1128. If you recommend two byewashes for these hill reservoirs, do you consider reservoirs safe which have no byewashes?—Certainly not.

1129. Do you consider that any reservoir should be permitted to be filled with water under these circumstances?—No. I think there ought to be a conduit on each side of the reservoir to intercept the water coming down the valley and also afford the means of drawing off the water from the reservoir suddenly and quickly; there was none in the Bradfield Reservoir until it arrived at the byewash, near the top of the embankment. I think there ought to be waste gates, or syphons, which would draw off a large body of water from the reservoir to meet the chance failure of these conduits I think that the 18-inch

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pipes were far too small for any such purpose, and they were so small that they could not be properly inspected; and in my opinion those pipes ought to be laid always in a tunnel, arched over, and in the solid ground, and not in the embankment itself. There should be tunnels in the solid ground on each side, in which these pipes should be laid, so as to get access to them at all times.

1130. Then, the waste gates which you propose should be made for taking out the water from the reservoir, I suppose, should be placed for the whole length of the reservoir, into the side byewashes?—Yes; adjacent to the byewashes to take off the great bulk of the top water.

1131. Made through the side of the reservoir into the byewashes, and come through each side?—I will sketch it. (*The Witness drew a sketch, and explained.*)

1132. Mr. Rawlinson stated that there should be a byewash from the top of the reservoir, so as to take off the flood water before it enters; do you propose that?—The conduits should be led up the valley until they met the natural stream, with sluices upon them, and all the water allowed to pass by these conduits to the byewashes.

1133. Mr. Rawlinson recommended that the byewashes at the side be made lower than the high water of the reservoir, and that there should be waste gates made out of the top of the reservoir, so as to relieve the embankment by letting the water off higher up?—If the waste gates be placed adjacent to the embankment, that will answer the purpose of taking off the body of water.

1134. They would assist in taking the flood water away as it came in?—Supposing that the reservoir is empty, and the water is coming down the natural stream, it may be delivered into the conduits, and be prevented by a sluice from entering the reservoir.

1135. I am talking of the reservoir being full, and a heavy storm coming when the reservoir is full?—Then I say there ought to be waste gates provided for the purpose of allowing a body of water to pass off suddenly, as well as the weir itself, which would take it off.

1136. Mr. *W. E. Forster.*] Waste gates situated where?—Situated near the embankment on each side.

1137. Not above the embankment?—Certainly not.

1138. Mr. *Ferrand.*] You do not propose byewashes to go the whole length of the reservoirs?—No, the byewashes should be contiguous to the embankment on each side constructed in the solid ground. I do not think I have quite made myself understood. These parallel channels following the contour of the valley, would take all the water on each side; and by tapping the natural stream, the whole of the water would pass directly to the byewashes without any coming into the reservoir.

1139. I know a reservoir where they have a large sheet of iron, which can fall down at a moment, and turn the reservoir with machinery; it drops down and stops the water coming down the natural stream; it falls down the byewash and relieves the reservoir if it is full from any water coming in?—Yes.

1140. You keep those channels in existence after the reservoir is full?—Yes, I would make and maintain them.

1141. Then you would certainly, in making a reservoir and completing it, have a byewash on each side to take the water that escapes down the hills, as well as the water that is coming into the top of the reservoir?—Not a byewash, but a water channel.

1142. Or conduit?—Yes; on each side, if the land will admit of it.

1143. Mr. *W. E. Forster.*] Are the Committee to understand that what you mean is, that you would have some provision by which, in case of a flood, the flood water would be prevented getting into the reservoir?—Exactly, to have perfect control of the water.

1144. *Chairman.*] You made a report to the Corporation of Sheffield?—I did.

1145. Do you adhere to the opinions you there expressed?—I do.

1146. Then probably you would not object to that report being received as part of your evidence?—Certainly not.

[*The same was delivered in, as follows:*]

"I am a civil engineer, and have been in practice for the last 30 years. I have had much experience, and executed works of great magnitude with and without the aid of a contractor. I carefully examined the embankment at the Bradfield Reservoir in March last, soon after the disaster, and at the same time viewed the Agden Embankment when in the act of being constructed. The site of the Dale Dyke Embankment was injudiciously chosen; it should have been placed a little higher, in a more contracted part of the valley, where the strata, from that circumstance, would not, in all likelihood, have been disturbed. In the situation adopted, and the puddle-trench being excavated to the depth originally intended, nine feet, and finding it necessary to go a maximum depth of 60 feet, still meeting with great quantities of water requiring continuous steam-power to overcome it, extending over a period of two years, even then it ought to have been considered whether it was not desirable to abandon the site in favour of another. Persevering, however, on the original position, Mr. Leather, the engineer, inspected the trench, and finding it clear of water, although kept down by pumping, ordered the puddle to be put into the trench; the consequence was, the immediate rising of the water in it, from the fissures in the rocks on its inner side, as the puddle was brought up in layers, and when arriving at the surface of the ground, the water would necessarily escape into the inner part of the embankment, saturate the lower part of it, and issue by small streams into the reservoir, causing this portion of the embankment to consolidate more rapidly than the outer part, and thereby have a tendency to injure, by rupture, the central puddle wall. I had reason to believe that the embankment, inside and outside the puddle wall had not been properly seated, by excavating and removing the soft vegetable earth and all compressible soil previously to depositing the materials over its base. This would cause compression and a tendency to force the toe of the embankment outwards. It was evident that the materials of the embankment had not been deposited, as they ought, in thin layers of 12 or 18 inches (especially in the lowest part of it) properly punned, and the clods broken with carefully selected materials on both sides of the puddle wall, but had been deposited by waggon

waggon tips of six or more feet in thickness, without any punning whatever; this objectionable method would be followed by unequal settlement in so high an embankment, and would tend to damage the puddle wall. I do not consider the laying of cast-iron pipes through so high an embankment, with valves at their lower extremity, is a safe and proper method of construction, inasmuch as they would be subjected to unequal pressure at their junction with the puddle wall, and any defective pipe or joint could never afterwards be removed or repaired. In the case of the Dublin Waterworks Embankment, lately brought under my notice, the pipes were laid in a tunnel of proper dimensions, surrounded with clay puddle, whereby an examination of the pipes could be readily effected. Such tunnel ought, however, to be made in the solid ground. Drains or cuts contoured along the margin of the reservoir, and leading to sufficient bye-washes at each end of the embankment, ought to have been provided to draw off the water from the valley, allowing it to rise in the reservoir only at the pleasure of the persons in charge of the works. This would have enabled the testing of the stability of the pipes and embankment under various pressures till arriving at its maximum. The pipes and bye-wash are quite inadequate to discharge the storm water coming down the valley. Assuming the reservoir to be full, and a rainfall of 1½ inches per hour to take place in the month of August, which is no uncommon occurrence, then the quantity coming down from a watershed of 4,300 acres, I calculate to be 97,556 cubic feet per minute. The pipes, under 95 feet of pressure, are capable of discharging 5,044 cubic feet per minute, which, deducted from the former, would leave about 92,500 cubic feet per minute. To pass this quantity over the bye-wash, or weir, taken at 60 feet in length, would require an overfall of four feet in depth. As this height would be dangerous to the embankment, the necessary length of weir should have been 250 feet, with 18 inches overfall. In other words, the present weir is, I consider, only one-fourth of the requisite length. Taking, as Mr. Rawlinson has done in his report on the Bradfield reservoirs, 250 cubic feet per second for every 1,000 acres, with 18 inches overfall, the length of the weir should have been 176 feet, making the present weir only one-third the requisite length, assuming no water to be issuing from the pipes, and this appears to be the minimum length of weir required. Storm waters coming rapidly down the valley, and rising suddenly against the embankment, would test it very severely; for the waters so rising could only be discharged through the pipes, under whatever pressure might be in the reservoir. At 95 feet head of water, two pipes, each of 18 inches diameter, would discharge 5,044 cubic feet per minute, at which rate it would require 15 days to discharge the contents of the reservoir; but the discharge would diminish with the pressure, and at 47½ feet head the same pipes would only discharge 3,565 cubic feet per minute; at 23¾ feet head only 2,521 cubic feet per minute, and when full, with no pressure, only 517 cubic feet per minute; consequently the reservoir could not in case of danger be cleared of water in less than a period of about three weeks. The errors I have pointed out, and the precautions neglected, induce me to the conclusion that the Dale Dyke reservoir is defective in design and unsound in construction. My objections apply with equal force to the Agden embankment, so far as their principles are alike."

Mr. *J. Murray.*

26 May 1865.

Veneris, 2° *die Junii*, 1865.

MEMBERS PRESENT:

Mr. Beecroft.
Mr. William Edward Forster.
Mr. Milner Gibson.
Mr. Hibbert.
Sir John Ogilvy.
Mr. Roebuck.
Mr. John Tollemache.

JOHN ARTHUR ROEBUCK, Esq., IN THE CHAIR.

Mr. Robert Rawlinson, called in; and further Examined.

Mr. *R. Rawlinson.*
2 June 1865.

1147. *Chairman.*] The last time you were examined, we stopped short in consequence of certain papers which you handed in; and those papers having been printed, and being before the Committee, we will commence the examination where we left off. I was going to ask your opinion as to the propriety of any inspection by authority of the making of reservoirs. Is it your opinion that inspection might be safely employed?—Any Government inspection which would interfere dictatorially with the freedom of the engineer in charge of the works would, in my opinion, be mischievous. At the present moment, for waterworks executed under the Public Works (Manufacturing Districts) Acts, 1863-64, there is practically an inspection which is mutually agreeable; that is to say, the resident engineers in Lancashire are at liberty to apply to me, if they think proper to do so. They are bound to submit their plans before they can borrow the money; and if I saw that the plans were so notoriously bad as not to be trustworthy, I could report against them to the Poor Law Board, and the Exchequer Loan Commissioners would not then advance the money. But that is not an inspection such as might be established by a Government engineer devising, or dictating, or meddling with works during their progress; and I do not think that kind of inspection could possibly work. I may state, that I have this morning received a note from Lancashire—and I was not aware that such a clause had been used—from the resident Government engineer in Lancashire, saying, "I have had a long day with the Ashton Waterworks. There was a clause in their Act obtained last Session, providing that, at the expense of the Town Council, the Secretary of State should, upon application, appoint an engineer to inspect and report on the progress of the works. I believe that the Council, feeling bound to fulfil this provision, have written to Sir George Grey to appoint such a person." A clause of that description, put into a Bill in Committee, to which the parties assented, might be attended with very great advantages.

1148. In the paper which you have placed before the Committee, you state, "The plans and sections of the proposed site of any reservoir geologically coloured should be produced on a scale of not less than six inches to the mile." Where should they be produced?—Either to the Home Secretary or to the Board of Trade.

1149. For what purpose are they to be produced?—Some public officer already existing might have those plans submitted to him before the Bill was committed, to see that certain regulations had been complied with, or that there were certain conditions in accordance with the following suggestion, that the plans were not got up by some person ignorant of engineering and of geology.

1150. In proposition 5 you state, "Plans in detail of the proposed works at a scale of not less than 20 feet to one inch, shall be produced, and be submitted for inspection and sanction to the Home Office, or to the Board of Trade." The engineer having made those plans and submitted them to the Board of Trade, you say you would require the sanction of the Board of Trade to those plans. Does not that mean inspection?—Not necessarily; for instance, we will say they were plans of the Dale Dyke reservoir; with the knowledge we have now after the fact, that there were two 18-inch pipes laid at the very base of the bank, to be hereafter buried beyond the reach of any human being to get at them, I should say that if those plans had been submitted, with the knowledge that I imagine that we have now of the danger of burying pipes in that way, such plans would very properly have been rejected.

1151. Does not rejection mean that you would place in the Home Office the power of saying whether a thing shall be done or not?—Yes, in the manner indicated.

1152. Is not that really the object of inspection?—So far, it would be inspection. I have read over very carefully Mr. Hawksley's evidence, and I am bound to say that I agree in a great measure with his remarks relative to the danger of interfering inspection. Depositing proper plans would not be an annoying inspection, such as he contemplates; a dictatorial inspection by a person sent on the works, and interfering with the engineer after the plans had passed that ordeal.

1153. Do not you see that the point which has been raised by Mr. Hawksley, and almost every other witness, is, that you are dividing, and thereby weakening the responsibility. In this very case, we will suppose that plans such as you propose about the Dale Dyke, had been sent in and approved, and that afterwards the reservoir had broken; who would then be responsible?—If the Government engineer had been supposed to

to have the power of dictating what other plan should be provided, the inference would be that it would bring the responsibility on him.

1154. Plans are submitted to the Government; the Government say, "Yes, we think those are sufficient plans, and you may go to work;" that is one case. But the Government may say, "No, we do not think they are sufficient plans, and you shall not go to work." In the first place, supposing that it had happened they had said "Yes," and the embankment had been made, and exactly the same catastrophe had happened, who would be responsible?—I say again, that I have not the slightest idea of suggesting that any such inspection should exist as would involve responsibility; but I think that, if you will read some of the other suggestions I have made, you will see that there are other points, which I can explain to you, which are of vital importance, which are frequently neglected, in making reservoirs.

1155. I wish you to explain this point before you go to those other points?—I think an opinion can be given on a plan as to whether it has been prepared in accordance with requirements of science, without taking any responsibility for the subsequent execution of such plan.

1156. You prescribe the width of the top bank, the inner and the outer slope, the puddle wall and other things; supposing every one of those requirements has been adopted by the engineer, that he has done all that is required of him by the Government, and that the Government say, "Yes, you have acted exactly as we desire, and we think that is a proper bank," and the bank is built, and it breaks down, who is responsible?—You must not make the Government answerable; if you think that you cannot interfere in the slightest degree, without making Government answerable, you must let plans and engineers alone.

1157. In the case supposed, you would say there should not be any responsibility on the Government?—No, not for the structural portion of the work.

1158. Supposing all these things had been done to the satisfaction of the Government, would you say that the Government should be held entirely irresponsible?—I would; just exactly as in the case of railways; I do not anticipate that a Government engineer, when he inspects a bridge or a culvert, would be responsible for the breaking down of the bridge, or for any subsequent accident; he merely reports to the department that, in his opinion, the regulations have been complied with, that is to say, that the bridge, according to his judgment, and according to the tests tried before him, appears to be strong enough.

1159. Then, in your opinion, that inspection does not weaken the responsibility?—I think not.

1160. And the inspection that you propose of the plans before anything is undertaken, you think would not all diminish or weaken the responsibility?—I have no intention of recommending anything that would lessen the local engineer's responsibility, and if anything I have suggested would, logically, be made to bring the responsibility on the Government, I say unhesitatingly that it must not be enacted; because the plans may be the most perfect in every respect that man could devise, and between the commencement and the finish of the work, something or other may occur with regard to the bank, the foreman or the contractor may neglect his duty, or the material may turn out of a bad character, and a catastrophe may take place when everything has apparently been done to make the embankment safe. But that the Government is responsible, because the plans were in accordance with some rules they had drawn up, I do not contemplate at all.

1161. Do not you see what you come to; that the Government, having approved of the plans, so far, all was right; but then, between the approval of the plans, and the end of the work, you suppose that something improper to have been done; the man who does that improper thing is answerable for it, and that does not involve the Government at all?—The most eminent men in the profession hold opinions as widely opposite as possible on the cause of the failure of Dale Dyke, and can come to no common opinion as to what swept that bank away. With regard to that bank, however, there are certain broad general rules which, in my opinion, were transgressed against; for instance, I hold that the puddle wall was one half too thin; I hold that the bye-wash was more than one half too small for floods that might naturally be expected to come down that valley. Again, I have inspected reservoirs where the top bank width was like the ridge of this paper—a knife edge; that, in my opinion, is very improper; I have inspected reservoirs where the bye-wash retained the water up to within 15 inches of top bank line, and that was a most dangerous condition. Since the Dale Dyke catastrophe some private persons put up a reservoir near Whitehaven, being apparenly ignorant of everything that was necessary to be known; they paid no respect to their drainage area; fortunately for them the bank was close to the sea, and was only a 25 feet embankment. Floods came down and swept the bank away in two hours; any practical engineer would have told them what would come of it. If these parties had had to submit plans before commencing they must have had such bye-wash room as would be necessary to pass that flood.

1162. Supposing that all these things are required to be done by the Government, there must be somebody to determine whether they have been done; for example, suppose you required a certain breadth of puddle wall, somebody must go down to ascertain whether that had been done or not?—No.

1163. How then can you ascertain that it has been done?—All that you can do is, that the plan submitted shall show that the engineer has complied with those requirements, just as in the Standing Orders Committee there are certain requirements with regard to railways, certain things must be shown on the plans.

1164. Then would you not give any power to the Government to say that the reservoir should be filled?—The Government might, if it thought fit, just as in the case of a railway, require that the reservoir should be inspected before they began to fill it, in order to see that the top bank width was that which was stipulated, to see that the height of the bank above the bye-wash was that which was stipulated, to see that the outlet works were in accordance with the suggestion, and to see that the area of the bye-wash room was in accordance with the drainage area above it.

1165. Have you not just come to the very conclusion referred to, namely, that somebody must go down to ascertain whether the requisites demanded

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demanded by the Government had been followed out?—That is at the completion of the works; but not an intermediate inspection.

1166. Is it not necessary that somebody should go down to ascertain whether the conditions imposed by the Government have been fulfilled?—It would be necessary to the extent indicated.

1167. Then to that extent you think that Government inspection is required?—I do.

1168. And the consequence of that inspection is the permission or non-permission by the Government to fill the reservoir?—A report to the department that sent him down that the requirements had been fulfilled, or had not been fulfilled.

1169. Supposing he reported that they had not been fulfilled, would you give the Government the power to say that the reservoir should not be filled?—I think that ought to follow.

1170. Have you ever embodied any of your suggestions in a proposed Bill?—At the request of the Honourable Mr. Baring, I did sketch out proposed clauses, and submitted them to the Home Office at the latter end of last Session.

1171. What was the result?—I have heard nothing of them since.

1172. So that you "cast your bread on the waters," and it has not returned?—It has not yet come back; I have seen nothing of it; I concluded that my clauses had not met with approval. I know how exceedingly careful the Government necessarily is not to incur responsibility, and I should be exceedingly sorry to be the means of bringing a responsibility which I knew could not be properly discharged.

1173. You are aware of the curious diversity of opinion that has been expressed by eminent engineers upon this inquiry, in this room?—Yes.

1174. I think I may state to you, that there are only two engineers who agree, that is, Mr. Hawksley and Mr. Fowler, and that every other engineer has given us separate and distinct cause of the failure of that dyke, and we have examined men of the highest knowledge and experience; in that state of the case, do not you think it would be rather safer to place a good deal of power in the hands of the Government, to protect the lives and fortunes of people who live under these embankments?—In my opinion it would be absolutely impossible for the Government to establish an active inspection without making itself responsible, and supposing the Department I am now serving were to ask me to take that responsibility, if they would give me 10,000 *l.* a year I would decline it, because, except I had full charge of the reservoir embankment, the power of stopping the contractor, of turning off the men, appointing the foreman, and in fact, except I was in the position of the acting engineer, nothing on earth should induce me to take a fraction of the responsibility upon me by inspection.

1175. Then you do not think that there would be any increase of safety by that partial sort of inspection which you agree ought to be exercised?—I only think that you would have the means of ensuring some degree of attention. If a man had to submit plans before he could get his Bill, he would naturally look about him; he would, according to those general requirements, see that his puddle wall was to be 10 feet wide at the top, that his top bank was not to be less than a given width, that the height of that top bank above the bye-wash must be in proportion to the height of the embankment was not less than a given depth and that the bye-wash space was not less than a given length. Again, with regard to his outlet works, he may devise what kind of outlet works he thinks proper, but he shall not bury timber nor iron in such way that he cannot repair it, and that it may go to destruction, and do mischief.

1176. Take the actual case before the Committee; a great catastrophe has occurred in the Dale Dyke; an embankment of some sort is about to replace that which has been carried away; would you think that all precautions that the Government ought to take had been taken, if it were required by an Act of Parliament that before that embankment was replaced, those peculiar conditions which you have just mentioned have been fulfilled; that the Government should say they have been fulfilled, and that then the Government should say you may fill the reservoir; do you think that would be sufficient in the way of protection for the public?—On behalf of the public it would. But the engineer who re-makes that bank will have cast upon him a very grave responsibility. Embankments have to be made out of the materials that rise in the place; under one set of circumstances the engineer may have to deal with all clay, which apparently would be the best thing he could have to deal with; but if it is injudiciously used, it would perhaps be about the worst; because if an embankment of that height (95 feet) had to be made of some kinds of clay, and made in wet seasons, in a careless manner, the probability is that the whole bank would have spewed out on both sides; and as Mr. Hawksley very properly said, it would not stand. I know some railway banks now that will scarcely lie; that is, I know banks that have spread out seven to one and will not stand, and the material they are made of when it came out was the soundest looking material you could conceive; it was oolitic marl, which melts like quicklime, absorbs water, gets into the consistency of cream, and when put in place will hardly ever dry. The Dale Dyke bank is rubbly material; and it certainly was a great mistake, in my opinion, to mass that rubbly material on the two sides of that puddle wall, leaving the puddle wall itself supported by a mass of material pervious to water.

1177. Then your opinion is that the Government having done all that you suggest, the responsibility, if the embankment should burst, will lie on the engineer?—It must lie on the engineer.

1178. And that therefore the precautions you propose do not in any way diminish his responsibility?—No, not in the slightest.

1179. And therefore can do no mischief?—And therefore can do no mischief. In fact, you only undertake that certain things shall be completed; you do not say that he shall not make his top bank more than six feet wide. I myself would make the top bank double that width; you say that he shall not make it less. You do not say that he shall not make it so much higher above his bye-wash, but that he shall not make it less. You do not say that he shall not make his bye-wash longer, but that he shall not make it less. In the Dale Dyke embankment the bye-wash was about 60 feet round, it was 60 feet in a horse-shoe shape. That bye-wash ought to have been 129 feet in clear length. I have laid it down as a rule, and it is worked out from what takes place from floods of water gauged off the ground

ground in the district, that a bye-wash should not be less than three feet in length for each 100 acres of drainage area. Any engineer can work the problem out. On the Bradford area some 38 cubic feet per second have been gauged as coming off 100 acres.

1180. Mr. *W. E. Forster.*] Is that the area in Wharfe Dale or that in Aire Dale?—It was one of the lower embankments; the information is given in the Bradford Report; Mr. Bateman has also reported something similar.

1181. Mr. *Milner Gibson.*] Do you know whether there is any concurrence of opinion among engineers as to the general requirements which you think ought to be adopted?—I have no doubt that if the paper I have put in were discussed at the Institution of Civil Engineers, it would be cut into mince-meat by some opponents; there would, however, be supporters of such clauses.

1182. *Chairman.*] You do know that there would be no concurrence?—Certainly not; and I should by some probably be made to appear the most ridiculous human being who ever lived.

1183. Have you retained a copy of the Bill which you sent to the Home Office?—I have (*producing the same*).

1184. Is there anything in the Bill you have handed in distinct from the propositions you have now made?—There is something more; there is something about magistrate's jurisdiction in the case of future inspection.

1185. Mr. *J. Tollemache.*] When did you prepare that Bill?—I prepared it last autumn.

1186. Is there anything you wish to add to it?—No.

1187. Then that Bill, in its present form, you would recommend for adoption?—I am not a lawyer, as I daresay the Chairman will see upon looking at the clauses; I did not feel that I was in a position to take any person into my confidence, and I have simply embodied my own ideas, worked out from my own inspection.

1188. *Chairman.*] Then put into proper legal phraseology, it is what you think ought to be done?—I think some clauses may want modifying and bringing into keeping.

1189. Can you explain that now?—I could hardly do so; it must be done by some person who is accustomed to draw Bills.

1190. I said that, put into legal phraseology, those are your opinions?—They are my opinions.

1191. Is there any other suggestion you wish to make?—I have said, in the paper which I have handed in, and which has been printed, "cast iron pipes, culverts of timber, or other material liable to decay, shall not be used for outlet discharge, or for the overflow works, if required to be buried under or within any reservoir embankment in such manner as to preclude repairs and endanger the structure by decay." There is, advisedly, nothing said as to how those things shall be done. My own practice would be, that a culvert of masonry shall be constructed in such places that it cannot give way, in a firm, solid part of the ground; or, if cast iron is used, the pipes should not be less than three feet internal diameter, and in that case you could renew them; you could line them, and you could keep them perfectly sound and safe. The 18-inch pipes laid under the Dale Dyke no engineer can ever repair. Those pipes had also the valves on the outer end; they are declared to be tight now; but those pipes might be tight for 10 years, and they might suddenly give way. Water is a fluid, but you may consider its action as being like a solid; that is to say, if you arrest a pipe full of water in motion it is almost equivalent to stopping a bar of metal of that weight from moving forward; but with this contingency a bar of metal would only strike end on, it would give out its power at the end; but water gives out its power over every square inch of its sectional area; and every time that a man screwed those outer valves down, and arrested that column of water, he would make a ram of the water inside, which would hit the weakest part of his pipes; and if one of those joints was weaker than the other and the slightest amount of motion was once set up in the lead by his repeatedly opening and shutting that valve, he might ultimately hammer and hammer and knock the lead out of that joint; and if that happened in the centre of the embankment he could not have got to it to repair it. That is a form of accident which constantly takes place in street mains. Again, cast iron is of so fickle a character that you may test it up to five or six times the power you wish it to resist; you may make it of extra strength; but it may be skin-bound; and if even the pipes shall lie on the surface after being tested up to 200 pounds to the square inch, with no strain upon it, it may crack; it cracks from some crystalisation or some imperfection in the casting. Therefore I say that no engineer is justified in burying pipes within an embankment to which he can have no access.

1192. Have you had an opportunity of reading the evidence which was given before the Committee by Sir Arthur Cotton?—I heard Sir Arthur Cotton give part of his evidence.

1193. His idea was that, instead of pipes, there should be masonry outside the bank; that the water should pass through the culvert, and not through the pipe, and that whatever was done, it should be done beyond the bank, in solid ground. Is that your opinion?—I think Sir Arthur Cotton said that in India they had masonry outlet culverts. I recommended and constructed such culverts years since.

1194. And that they never touched the embankment?—They were in solid ground.

1195. Do you coincide in that precaution, which he said should be taken?—Certainly; and I also heard what he said with regard to the puddle trench and puddle wall. My own opinion as an engineer is, that many a site in England is ruined by the modern practice of sinking a puddle trench. It has become one of those things in which one man follows another; every man who has a reservoir to make now, considers it absolutely necessary that he must sink a puddle trench and build a puddle wall. My own opinion is, that many reservoirs have come to grief through sinking a puddle trench and relying on a puddle wall. I may explain it in this way; you have the valley in its natural state; it may or may not be pervious to water, but, at all events, it is just as nature placed it. You proceed to sink a puddle trench; you commence in that valley, and you put up engine power; you go on as in Dale Dyke, where the first design was to go 20 feet; then they found they must go 30 feet, 40 feet, and 50 feet, and in some cases 60 feet. They had 40 horse-power pumping night and day. I believe they were two years at it. Observe the effect of such pumping; it washes and draws all the washable material, and if the subsoil was porous before, it is ten times more porous when you

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you have done with it; and if you have not made adequate provision to take away every ounce of spring water that may find access to that puddle trench, you are in greater danger than you were at the commencement. In India they never made a puddled trench at all, because they had no means. They merely prepared the surface, and then laid a solid impervious bank over the whole surface, brought up slowly, washed by the monsoon rains, and baked by the tropical sun alternately, which was an infinitely better bank than a bank made with the ordinary puddle trench and puddle wall, having sand, gravel, or, as at Dale Dyke, rubble; many modern puddle trench and puddle wall banks have come to grief.

1196. Mr. *W. E. Forster.*] How long have you been a Government engineer?—Since 1848.

1197. Were you previously engaged as private engineer in making reservoirs?—I have been engaged as a private engineer since I was 21 years of age; that is, I have been engaged in engineering works. I was engineer to the Bridgewater Trust Canal, I think, from 1841 to 1845.

1198. As a private engineer, were you ever engaged in making reservoirs?—Yes.

1199. You are an inspector of railways, are you not?—No.

1200. You never have been?—No.

1201. I suppose you know the mode in which the inspection of railways is conducted?—No.

1202. You cannot state how far the Government interferes with regard to the making of railways?—I do not know anything about it.

1203. You are Government engineer for the Lancashire Public Works?—Yes.

1204. That is to say, inspecting engineer?—All plans for works are forwarded to me.

1205. With regard to any of those works, is inspection thought necessary by the Government for the safety of life?—The Bill contains no power for the Government to take upon itself inspection which would involve responsibility; and any inspection that I do, or any advice that I give, is done and given voluntarily.

1206. The question put to you is this; are any of those works of such a nature that life might be in danger?—Yes; there are large reservoirs; the engineers have consulted me, and have modified their plans; they have, for instance, altered their outlet works, and they have prepared their bye-washes, in accordance with recommendations that I have made to them.

1207. In what different position are the undertakers or the engineers of such public works from the undertakers or the engineers of general works throughout the country, such as the Bradfield Reservoir, or the Bradford Reservoirs?—None; they are local engineers; they are not appointed by Government; they are not interfered with by Government, nor are they interfered with by me; and if they chose to reject my advice they could do so. If, however, plans sent to me were notoriously bad, I should refer them back, with a minute pointing out what I considered defects; and if the engineer said, "I will not alter my plans for you," I should simply report to the Poor Law Board that I could not approve of such plans, and they would not get public money.

1208. Is there not this difference, that the Government, through the Poor Law Board, sanction such works before they are undertaken?—It simply, on my report, allows the plans to pass.

1209. Is there not this difference, that by the Act of Parliament which was passed for the assistance of the Lancashire distress, the Poor Law Board had something to do with the approval of those works?—They had no more to do with the approval of those works, than to say whether they would sanction a loan upon them, as being useful works. They have no right to cause an inspection to be made, which shall control the engineers in their mode of execution; but inspections are made, from time to time, for the purpose of satisfying the Poor Law Board that the money is being *bonâ fide* expended on beneficial works.

1210. That would have included the power of the Poor Law Board to refuse to make a loan for works, which you reported were of such a nature that they would be dangerous to human life?—It would; and as we do not let them have the whole sum at the commencement, but by instalments, in the middle of those works, or at any part of their progress, if they were not doing what I considered was right, I could stop, by my report to the Poor Law Board, any further advancements upon the works until they had modified them.

1211. That being the case, are there any requirements that you have made for the engineers of those works, which are additional or different from those which you have handed in to this Committee?—No. With regard to sewering, there are general instructions which are printed.

1212. I understand that the principle of your proposition is this, that you would lay down certain rules which you think ought to be adhered to by the undertakers of reservoirs, but that their adherence to those rules should not in any way alter their responsibility afterwards?—The word "adherence" is not correct, because it says that they shall do certain things, that is to say, they shall not make the top bank less than a certain width; but if they choose to make it wider or stronger, they may do so.

1213. I think the Committee understand your proposition to be this; that your rules are always in the nature of a minimum, and that adherence to those rules merely means that they do not make them less or under those rules?—Yes.

1214. You do not propose any control by the Government through the inspector, or in any other way upon the actual site?—No.

1215. Will you state why you do not propose that?—The first thing required is, plans coloured geologically; that is, the six-inch ordnance plan; and if plans of that character with trial borings or trial-pits came to me, and I from any experience I might possess, considered that there would be danger in the further operations of the engineer, I should probably in my report to the Government office which transmitted the plans, embody my objections or suspicions, and it would be for that Board to require further evidence or otherwise from the engineer, if they thought it was necessary.

1216. And you propose that such report of yours should be furnished before the Bill for such works was obtained in Parliament?—I should propose that that report and those plans should be furnished to the Committee of the House which had the Bill to consider, and then it would come under general discussion before the Committee.

1217. Then your suggestions up to suggestion No. 6, are all requirements of plans, which may or may not affect the getting of a Bill by the undertakers?—Yes.

1218. Then

1218. Then, so far as your suggestions up to No. 6 are concerned, it is impossible that the responsibility of the undertakers can be affected, because they are merely requirements which the Committee will oblige them to submit to before they get the Bill?—Yes; and I may state with regard to my inquiry into the Sheffield failure, that I have got before me a list of things which I asked for before we went before the coroner. I asked for longitudinal and cross sections of that proposed reservoir at Dale Dyke; I asked for sections and details of the puddle trench; I asked for plans and sections, and details of the outlet pipes; I asked for plans and sections of the overflow or bye-wash; I asked for sections of the valley on the site of the reservoir, showing the dip of the beds of rock; I asked for sections and particulars, of trial-holes on the site of the proposed embankment and puddle trench; I got none of those things.

1219. Do you imagine that was because they had not got them and never had them, or that they did not choose to give them?—That I do not know. Then I asked for the area of the gathering ground above the reservoir, and I got it. I asked for the ordinary flow of water in the stream, and the least dry weather flow in the stream, and the greatest volume of flood water in the stream. I did not get that information accurately, but I got some returns. I got the fall of rain. Then I asked for particulars as to springs of water on the site of the proposed embankment in the puddle trench. I did not get that. I asked for the arrangements, if any, which had been made to remove the springs of water from the puddle trench and the outer seat of the embankment; I did not get that.

1220. The suggestion from No. 6 to No. 12 inclusive, are all suggestions of requirements of construction before certificate that the reservoir shall be filled, are they not?—Yes; and the probability is that if they were mentioned to Mr. Hawksley, or to any eminent engineer, he would say, "What is the use of making these requirements? We have all known them long enough, and no reservoir is made without them." I can only say that my recent inspections, which have been very wide within the last 18 months, have brought me to the conclusion, that there are a great many reservoirs which have not a safe top bank width, and which have not a safe depth below the bye-wash.

1221. With regard to these suggestions, you consider they are all requirements which would not remove the possibility of danger, but would diminish it?—Yes; for instance, with regard to two of those reservoirs at Sheffield, the water had been blown over the banks the very night after the accident, that is, spray and wash had been over the top of those banks on the Sunday night. The water was impounded too near the top.

1222. Does the Bill in manuscript which you have handed in contain any clause empowering the Government to stop the filling of a reservoir upon a report from the inspector that these requirements in the construction have not been complied with?—No.

1223. Then how do you propose, after the Government has been informed that a reservoir has not been constructed according to the requirements which you, as their inspector, think necessary for the preservation of human life, that the Government should take steps for the purpose of preventing the reservoir being used. I assume that there must be a report, and sanction after inspection?—You will also find certain clauses by which persons resident below a reservoir have power to move the local justices to cause inspection to be made, to compel an inspection by an independent engineer; that is to say, that if parties situate below a reservoir have cause to believe that there is any risk to be run, they can move the local justices to ask for an inspection.

1224. Are the Committee to understand that you propose that the Government should go to the expense of sending down an inspector to find out how a reservoir is constructed, and to make a certain report to them, and that, on receiving a report that the requirements which that inspector found necessary have not been complied with, the Government should treat that report as if it were so much waste paper, and take no action upon it; or what would you propose to do?—"You must, of course, send an inspector down to report that the several requirements are complied with;" but you will find, in that Bill, I have suggested that there should be an annual inspection.

1225. With regard to inspection before reservoirs are filled, although you have not been engaged in the inspection of railways, are you not aware that, until the Government inspector has made a report that it is safe, an opportunity is given to the Government to prevent its being opened?—I believe that is the practice.

1226. Then why should not the same results follow from inspection of reservoirs by a Government inspector?—It ought to be so; before a reservoir is filled, I think the office that has sanctioned the plans ought to have a certificate that the requirements have been complied with.

1227. Your two last suggestions are requirements for the maintenance of the reservoir, are they not?—Yes.

1228. How do you propose to see that they are complied with?—In that Bill I suggest that the magistrates be authorised to request the bridgemaster of each county to make an annual inspection along with his bridge inspection, and report to the local justices.

1229. Who is the bridgemaster?—There is always a bridgemaster in every county.

1230. Is he always a civil engineer?—He need not be a civil engineer.

1231. Why do you suggest the bridgemaster instead of a Government inspector?—Because I do not think that Government is very anxious, nor should I be anxious, to set up a number of inspectors to traverse the country; and if you can bring into action that which exists, it would be simpler and far more economical.

1232. Did you hear Mr. M'Clean's evidence?—I do not recollect it.

1233. I will call your attention to an answer that he made to a question of mine, to the effect that he had inspected the Holmfirth Reservoir, that it was out of repair, and that the inspector must have known it was out of repair. Are you aware that was the case?—It was so, and I have seen many reservoirs out of repair. The banks going down, the valves when we attempted to move them were rusted up and stuck fast, the bye-wash had been tampered with by planks being put in, and some of the cloughs were rotten.

1234. Do you think that a sufficient check upon

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upon undertakers against allowing their reservoirs to get out of repair would be made by their being put under the control of bridgemasters?—I think that if magistrates were empowered to order an inspection, and to have an annual report, it would have two effects; where the parties owning reservoirs knew there was to be an inspection, their attention would be more turned to it; and if it was the duty of some person to see those valves raised, to see that the cloughs could be moved, to see that the bye-washes were of the width that was specified, and that the top bank was at the relative level specified, a great deal of good would be done; and you would not, as I may term it, bring the centralizing power offensively into play.

1235. Is it because you think an inspector from the Central Government would be offensive to the localities, or is it because you think that the Central Government might by such annual inspection relieve the undertakers of pecuniary responsibility, that you propose that it should not be done by a Government inspector?—Government can never be sure what kind of person it will appoint as an inspector; and we know that some Government inspectors may make themselves very offensive; Mr. Fowler told you, which was not very complimentary to Government inspectors, that they were generally a very inferior class of men.

1236. Then is it on account of that sort of impression that you make this suggestion?—The less you put on Government of that kind of work the better. If you can provide a machinery by which you shall have some degree of security for the public, without the direct intervention of Government, so much the better.

1237. Do not you think that in many cases an inspector, appointed by county justices, going to inspect a reservoir which was owned by inhabitants of towns, would be quite as likely to lead to a collision as an inspector from the Government?—Supposing you do what has been done, which I was not aware of until I received this letter, that in the Ashton-under-Lyne Waterworks Bill they have submitted to a clause by which they are enabled to ask the Secretary of State for Home Affairs to appoint an engineer to inspect, and that they will pay the cost of such inspection; if persons resident below any reservoir were really in bodily fear, and had a right to be in fear, and they chose to petition the Secretary of State to send down an independent engineer, he would not need to send down a paid Government inspector; but he could ask the president for the time being of the Institute of Civil Engineers, to recommend some competent engineer to make that inspection; and if the parties locally could be called upon to pay the cost great good would be done, and there would be no centralization there; it could be permissive.

1238. Are you aware that in several Waterworks Acts which have been passed lately there is a clause by which persons below the reservoir can make application to justices to decide whether any fear they may entertain of the safety of the reservoir is well founded or not?—Yes, I believe there is such a clause.

1239. Have you ever considered whether you would suggest any alteration in that clause?—I think it would be a very proper clause that persons resident below a reservoir, if they chose to incur the expense of an inspection, should have the power to ask the Secretary of State to make an inspection.

1240. Would you go as far as this, that if they were willing to advance the cost, and it should turn out that their fears were well founded, the money should be refunded?—Yes, refunded by the proprietors; because reservoirs are used by companies and by individuals.

1241. Sir Arthur Cotton stated that he considered that if the Bradfield Reservoir could have been lowered two yards in an hour, there would probably have been no loss of life; and Mr. Fowler said that it would have made no difference; can you give any opinion upon that?—I agree with Mr. Fowler that it would not have made an atom of difference, and in making provision for drawing off a larger volume of water than the brook is capable of removing, you might almost sweep the people away by trying to save the bank; you might do a great deal of mischief. Two valves on the Bradford waterworks, I think 18-inch valves, under 90 feet head, were only half opened; but it was a very good thing we shut them down soon, or the probability is that we should have drowned half-a-dozen children in a village below; the flood from those valves rose suddenly, and it went down in a wall three feet high, so that a sudden drawing down of the reservoir might have done a great deal of mischief.

1242. There is a suggestion to prevent reservoirs being quickly lowered in your Bill, is there not?—Yes.

1243. Mr. *J. Tollemache.*] Are you acquainted with the kind of persons who are generally appointed bridgemasters in different counties?—I have known some few of them; they are generally local architects.

1244. Are they not sometimes common masons?—I do not know; but if he was a common mason, he could do what is required; that is to say, he could inform the justices whether an embankment was four feet, or five feet, or six feet above the bye-wash, because his common level and boning rods could tell him that.

1245. You propose that the justices should obtain from their respective bridgemasters an annual report of the state of the reservoirs of the district; do you think that, generally speaking, they are fit for that important duty?—I have not had very large experience of bridgemasters, but all those whom I have known would unquestionably be fit for the duty.

1246. Supposing they were unfit for the duty, it would be no security whatever to the public?—No, it would not; and I think the justices might be empowered to call in any local engineer, or any person they thought proper; it is simply a question of payment.

1247. Then you would throw the responsibility on the justices?—It would not be a responsibility.

1248. Supposing a reservoir gave way, and it afterwards appeared that the reservoir had not been kept in a sound state, would not the justices be responsible?—No, I think not; because the report would be made to them whether the bye-wash had been tampered with. Take a case which I have seen, where a bye-wash originally, we will say, six feet below the top bank, had stop planks put in to raise it up until it was only four feet below the top bank; and supposing that embankment subsided in half-a-dozen years, and was 18 inches below its original level, then you would have a state of things highly dangerous in

case

case of a sudden flood; your bye-wash is impeded, your top bank is lower than it ought to be. The justices could not be held to be responsible, I think, for that state of things, unless they neglected to give notice to the owners. Such a state of things would be the neglect of probably, half-a-dozen years; and, if they had a report annually, as they have for their bridges, they would make a representation to the proprietors, and be empowered to call upon them to alter that state of things.

1249. Is not the report of a bridge-master different from the report of an engineer on embankments?—Yes; but I think the fact that you had some annual inspection would almost of itself compel the keeping in repair.

1250. Do you believe that annual inspection is very important?—I do.

1251. Do you think that it is an efficient way of carrying on an annual inspection, to appoint officers, of whom at present you know very little, to be inspectors?—No doubt the most complete way would be, for Government to appoint a person whose sole duty it was to do that with other things, a superior class of person, and to do it annually; but you are making a new public officer, and you must contemplate at least 1,000*l.* or 1,200*l.* a year.

1252. At all events, are you in favour of Government sending an officer down to see that these requirements have been carried out after the works are completed?—Yes.

1253. Surely it would be only a continuation of his duty to inspect the works annually, afterwards?—Still, if a Government inspector is appointed for that, as far as I know the reservoirs in this kingdom, it would take one man his entire time; I have been enabled to make these inspections during the last two years, without its costing the Government anything, because I have been enabled to do it, working it in with my other work.

1254. Surely, if annual inspections are important, it is very necessary that those inspections should be carried on by some person who is fit for the post, and they should not be left simply to bridge masters, who are frequently appointed in a very strange way by justices?—The more I consider the question, the more I believe that annual inspection is necessary.

1255. You say that the more you consider the matter the more you see the importance of annual inspection; that being so, surely it is very important to secure to the public that the person who inspects the works should be fit for the office?—Yes.

1256. But you have no security that bridge masters are fit for the office?—All whom I have known personally I have no hesitation in saying are fit for it; I have not had any wide acquaintance with them.

1257. Do not you know that bridge masters are appointed by the justices as a body?—Yes; and the late Mr. Hartley, the engineer of the Liverpool Docks, was bridge master before he was appointed engineer to those docks.

1258. Taking the bridge masters as a whole, do you believe they are fit to perform this important duty?—I must confess that I never did know beyond some three or four, and therefore I have no idea what kind of men may be appointed in some of the purely rural districts. The men whom I have known have been in connection with Lancashire and Yorkshire, and they have been a very superior class of men.

1259. You say, at all events, you think the minimum of these requirements should be carried out in the construction of any embankment?—Yes, I think so.

1260. But you do not recommend that any person should inspect the works during their construction to see that they are properly carried out?—No.

1261. Taking the case of the Bradfield reservoir, it appears that, in the opinion of some gentlemen, the embankment itself was composed of loose rubbish; if these requirements had been carried out in that case, and the embankment had not been composed of that rubbish, would those requirements have afforded any security to the public?—None at all; if those pipes had not been there, the bank might have stood.

1262. At all events it is quite possible that these requirements might be carried out, and still the construction of the embankment so badly performed, and the materials of so inferior a quality, that these requirements would afford no security to the public?—Yes; but if the requirements had been complied with, you would have had two things in that bank which would have been different; you would have had no cast-iron pipes in the bottom, and the puddle wall, at the ground-line, would have been double its present thickness.

1263. Then you think, that provided the requirements had been carried out with an embankment ever so badly constructed, the embankment would be safely done?—I do not go so far as that; but if the puddle at the ground-line had been double the thickness it would have been four times its strength.

1264. If you are of opinion that these requirements would really not give proper security to the public, unless the works themselves were properly carried out, is not that a reason why there should be some inspection of the works during their progress, to see that the embankment was properly constructed?—There is no medium between responsibility and non-responsibility. If you interfere with the engineer in the construction nothing can save you from the responsibility; and, as I stated before, I would not be a Government inspector, under such conditions, because when there are 50 reservoirs going on at one time, I would not be responsible for 50 reservoirs; I would not undertake to do them even as a private engineer, if I could not get to them oftener than would be implied from their being situate so wide apart and so many going on at the same time.

1265. You would limit the interference of the Government to seeing that these requirements had been carried out?—Yes; at the completion as far as you could.

1266. Mr. *Milner Gibson.*] Would it not be necessary, in order to secure that these requirements had been carried into execution, that there should be periodical inspection during the construction of the works?—No.

1267. Are they all outward and visible?—Every one would be at daylight on the surface and outward and visible.

1268. All that would be necessary would be to inspect the reservoir previously to its being permitted to be filled with water?—Merely to inspect the plans, in the first instance, to see that the requirements were on the plans, and then to inspect the reservoir before it was filled with water.

1269. Mr. *W. E. Forster.*] That does not apply to No. 12, does it?—Yes.

Mr. *R. Rawlinson.*

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1270. How so, because it says: "Cast-iron pipes, culverts of timber, or other material liable to decay, shall not be used for outlet, discharge, or for overflow works, if required to be buried under or within any reservoir embankment in such manner as to preclude repairs, and endanger the structure by decay?"—An engineer could see that in five minutes.

1271. How could he tell they had been put in in such a way as to "endanger the structure by decay?"—If a cast-iron pipe is made three feet in diameter, it cannot be endangered by decay, because the engineer can repair it at any time he likes.

1272. How is he to find out that it is three feet?—Because he can go into it.

1273. Mr. *Hibbert.*] Referring to what you have just stated, take No. 7; how can you, unless you have periodical inspections, know that the puddle is of sufficient thickness within the embankments?—You cannot; you must trust to the honour of the engineer.

1274. The requirement No. 7, seems to be the only requirement which would secure periodical inspections?—Yes; and therefore I beg pardon for stating that every thing would be visible; No. 7 would not be visible.

1275. Is that the only part which would require periodical inspection during construction?—Yes; if Government thought it were necessary.

1276. To obtain the width of the puddle bank at the bottom of the embankment, would it be necessary to have inspection during construction?—Yes.

1277. *Chairman.*] And all the way up?—Yes.

1278. Mr. *Hibbert.*] I understand your clause, in the first instance, to relate to plans which are to be laid before the Board of Trade or the Home Office?—Yes.

1279. Those plans would be examined and reported upon, and that report would be sent to the Committee before whom the Bill was being inquired into?—Yes.

1280. Supposing the Bill was obtained, according to requirement No. 7, to carry out your plan, you would require inspections during the progress of the works?—Yes; if you wanted to be certain that it was carried out.

1281. Would it not be almost useless to make the requirement, unless you were sure it would be carried out?—Perhaps it would; and perhaps it would be better to strike No. 7 out; for it might be a useless requirement if the whole of the material of the bank was of the nature of puddle. The speciality of the puddle wall is only required where you are making a bank of previous material.

1282. I understood you, in your examination the other day to state, that you thought the Bradfield accident was owing to the puddle wall not having gone up sufficiently high?—No; that was not my opinion. I think Mr. M'Clean said that it was not high enough.

1283. Then the remainder of the requirements from number 8 to number 12 are requirements that could be seen after the completion of the reservoir?—Yes; all the requirements but number seven.

1284. And number 13 and number 14 are requirements that would be looked into at the annual inspection?—Yes.

1285. With respect to the valves; you say that the valves should be placed within the line of the puddle wall, and not in any part of the outer slope of the bank; is that better than placing the valves within the inner slope?—Of course there would be differences of opinion among engineers; but I should never put valves which I could not get at at any stage in which the reservoir might be. In the arrangement of those valves like the Indian plan, you could plug them outside, and remove the valves for repair on the inside.

1286. Supposing the valves are placed within the line of the puddle wall, is there not great pressure of water within the pipes between the valves and the bottom of the inner slope? Is not the pressure of water within the pipes likely to damage the joints?—No. As I conceive how the works ought to be, any pipes within the puddle wall would be balanced in their pressure; that is to say, if they were laid in the culvert, the water would be on the outside and inside, and the valve itself would open into the valve-well; so that the pipe within the puddle wall would have no strain whatever from water upon it.

1287. On your plan would you be enabled to examine the pipes between the bottom of the inner slope, and the valve within the line of puddle wall?—By drawing the water down you could.

1288. Not without?—Not without.

1289. Do you think that would be rather objectionable?—No; that would be only a syphon pipe, which I should not care whether I used or not. There would be no pipe; there would be simply the valve and the valve well; and all those you could get at *seriatim*, as you drew the water down.

1290. Supposing there were no puddle trench at all, where would you place your valve?—The construction would be exactly the same as if there were a puddle trench.

1291. You have stated that you heard a portion of Sir Arthur Cotton's evidence with respect to not using puddle wall at all, in Indian embankments. Did you hear him state that in case of an unsafe foundation, instead of building the embankment on puddle, he would build it on masonry foundation?—No, I did not hear him say so; but if I had a foundation which I had reason to distrust, rather than go to an enormous expense in sinking a deep puddle trench, I should sink a surface trench, and seat the bad part of the embankment with concrete, which would be equivalent to Sir Arthur Cotton's masonry foundation.

1292. You would rather place your embankment on a concrete foundation?—Yes; but all sorts of conditions arise in actual practice; I have seen one embankment, as good an embankment as ever was made, brought to ruin because the site of the embankment was partly hard, and partly soft. There was a great geological fault running down the valley, and one side of the bank was on a foundation which was perfectly solid, and the other part of the bank was on a substratum that was compressible by weight; consequently the embankment was ruined by one half of it subsiding, and the other half of it standing firm; and there is almost every set of conditions you can conceive of in practice; so that no single rule with regard to the mere making of an embankment would be of avail; but the requirements as suggested would be

requirements that might be of general application, except No. 7, which I should like to withdraw.

1293. With respect to Lancashire public works, you have stated that reservoirs have been made in portions of those works: have you made similar requirements in those cases?—I have.

1294. Has any difficulty arisen in carrying them out?—No.

1295. Did you make a requirement like number 7?—No, I did not.

1296. I suppose you had considerable power in those cases, because the Poor Law Board had the power to refuse the money unless you certified that the works were being carried out properly?—Yes; but I think I can safely say that if you canvass the Lancashire engineers, they will not tell you that I have ever dictated to them, or put the official screw upon them; it has been a conversational chat.

1297. Have you found the plan that was adopted easy to carry out; have they agreed to your regulations without much objection?—Yes; but simply because they have been more as friendly suggestions than dictatorial.

1298. You suggest that an annual survey should be made by county bridgemasters; is that on the ground of economy, or because you wish to avoid the appointment of another Government office?—It is from knowing the distaste there is in this country for centralisation, and to avoid setting up a new Government officer.

1299. If a county bridgemaster were appointed to survey reservoirs, he would require an additional salary; upon whom would you propose to throw the amount of that additional salary?—That I have considered, and I dare say that would be a stumbling block in the way, because if you took it out of the general rates the local justices would not sanction it; but I do not see any other method of paying him except out of the county rate.

1300. Are you aware that there is very great difference in the position of the men who are appointed county bridgemasters?—I can now conceive it; but until I was asked the question, I had always looked on them as a superior class of men, so far as my experience went.

1301. Do you judge more from the men appointed in the Manchester, Liverpool, and Salford Hundred districts?—Yes, and West Derby, and the gentlemen immediately connected with Liverpool and Manchester. I have never met any other bridgemasters.

1302. What is the number of reservoirs in the country which would have to be inspected?—I have no idea.

1303. Do you think it would be difficult for one man to make an annual inspection of them?—I have no conception of the number. They are all through South Wales, and Lancashire, and Yorkshire, and other parts. There are many reservoirs which were made by the great canal companies, 50 and 60, and 70 years old, and they have gone on working without inspection; and I suppose the reply may be, that all these others may do so. My answer is, that we have had these great and fearful failures within the last 10 or 12 years. I have known several reservoirs fail from cast-iron pipes having been laid through the embankment, by a creep of water along the pipe blowing the embankment out, and washing it away; there was one at Birmingham within the last 12 years. I have known them fail by the pipes cracking. One of Mr. Hawksley's crushed in that way at the Rivington works, which he described. There was a large reservoir being made in Australia, and the outlet pipes were of cast-iron, and they crushed.

1304. Do you suppose the undertakers of reservoirs would have any objection to an annual inspection of the kind you suggest?—I do not think they would, to see that the works were in proper order, and that the bank was at its full height, and its bye-wash unimpeded. Within the last month there have been falls of rain, which, if they had occurred in that district of Yorkshire, where the Dale Dyke Reservoir stood, with the limited bye-wash area, nothing could have prevented its going over that bank; those falls of rain must inevitably have gone over.

1305. *Chairman.*] You have said that you wish No. 7 of your suggestions to be withdrawn, because No. 7 could not be carried out without inspection during the progress of the work?—That is so.

1306. Is not No. 7, a very important matter?—It would be exceedingly important, and the most important Clause, in the re-construction of the Dale Dyke Embankment with the porous material they have in that valley.

1307. I am not applying it to the Dale Dyke Embankment; but generally speaking, in embankments made with a central puddle wall, is not that puddle wall one of the great securities of the embankment?—It is.

1308. And therefore, withdrawing that from inspection, do not you withdraw the most important part of the whole matter from inspection?—You certainly would, as I say, if the embankment is made to depend entirely on the puddle wall.

1309. Does not every embankment which has a central puddle wall, mainly depend on that puddle wall?—No.

1310. When you say that, have you heard other engineers state directly to the contrary?—No, I have not; but if I heard them state the contrary, it would not modify my opinion; because I have seen reservoirs this week in which the puddle wall is being carried up, but the material on both sides of it is just as much puddle as it is.

1311. And it is only when the material on each side of the puddle wall is not equal to puddle, that the puddle wall is the main matter of consideration?—Yes. An embankment is made by laying layers of material; we will say six, or nine or twelve inches should be laid in even layers over the site of the bank, and that is consolidated by the material which is piled upon it. Now the puddle wall is the same material, in many instances, worked and chopped up by the men's tools, and incorporated until it comes into the consistency of well-ground and mixed up putty, until it is one uniform consistent solid mass.

1312. Mr. *J. Tollemache.*] Is the strength of the puddle wall, a most important point in the construction of an embankment?—No doubt it is. When you are constructing an embankment where the puddle wall is to be the resisting medium, it may frequently be the case that the whole safety of the bank rests on that point.

1313. And the requirement respecting that most important point you now leave out?—I simply say that I must come to that conclusion, because I am unwilling by any recommendation of mine to set up that centralising power which would have to take responsibility.

Mr. Matthew Bullock Jackson, called in; and Examined.

Mr. *M. B. Jackson.*

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1314. *Chairman.*] You are a civil engineer?—I am.

1315. You have had large practical experience?—I have had great and diversified experience in the construction of hydraulic works of almost every kind, in the construction of piers, pumping works by waterwheels, pumping by steam engines, and the construction of large gravitation reservoirs. I have constructed waterworks which are certainly not exceeded in extent by more than three in this country, and by none in success.

1316. Does your experience extend beyond this country?—My experience has been chiefly in Australia.

1317. What reservoirs have you constructed there?—In Australia I constructed a reservoir for the supply of Melbourne, 1,303 acres in extent, and containing 6,500,000,000 gallons. I was consulted by the Government of South Australia with regard to the waterworks for the city of Adelaide. I was consulting engineer for the Ballarat Corporation Waterworks. I was the first engineer for the Bendigo Waterworks. My services were called in by the contractors for a portion of the City of Sydney Waterworks, when they got into difficuly; and, upon my designs, and after my specifications, upwards of 40 reservoirs have been constructed in the several Colonies with success. In fact, I might say that up to the time of the adoption of universal suffrage in the colony of Victoria, I was almost invariably consulted in regard to every large hydraulic work.

1318. Is there anything peculiar in the construction of reservoirs in Australia, or anything that would induce you to adopt a different mode of construction to that which is adopted in England?—There is; the country is sparsely peopled, and there is a wide choice of sites for the construction of reservoirs; you are not tied down to difficult sites, as you are in this country. In nearly every case there is a choice of a vast number of sites, and you can select a site where, in the majority of cases, you will have little or no difficulty about securing a watertight foundation; and the same remark applies to reservoirs in India.

1319. So that in fact it is more easy to construct a reservoir in Australia than it is in England?—Other things being equal, it is much more easy, on account of the great advantage attending the choice of sites.

1320. From your experience, have you formed any opinion as to the mode in which they are now constructed in England?—I have.

1321. Is your opinion favourable or unfavourable to the mode of construction in England?—My opinion, on the whole, is favourable; I may say that during the last 14 months I have devoted the whole of my time to inspecting the reservoirs in the counties of Yorkshire, Lancashire, Cheshire, and Derbyshire, and available supplies of water in Wales; and I think that I know almost every reservoir in the country above the size of a good horse-pond.

1322. Have you any experience of the mode in New York and the United States?—I have in my possession copies of the whole of the working drawings for the supply of the city of New York down to the veriest details, and I have copies of the working drawings of several other waterworks for the supply of large cities in America.

1323. Is there anything peculiar in the construction of American reservoirs?—There is. American reservoirs, and especially those of New York, and others which I could mention, have no inner slope of earth on the inside of the embankment.

1324. Is it perpendicular?—It is almost perpendicular. There is a masonry facing in some cases, and in others there is a timber construction; the inner part of the embankment up to the face of the puddle wall is entirely done away with, which shows that that part of the embankment is there properly regarded as merely a support for the puddle wall. In this country, the inner part of an embankment is used as a support for the puddle wall, instead of masonry or timber and is made with an easy slope, so that the wash of the water may wash away the front part of the bank, and so cause the bank to slip away from the puddle wall. The safety of most embankments in this country depends almost entirely on the puddle wall; and if you maintain the puddle wall right and sound, the reservoir is safe.

1325. In your opinion, is that mode of construction which is adopted in New York a wise one?—I think that in some cases it is a very wise one. If you have abundance of material, and are in a place where labour is dear, it is very advisable to adopt that mode of construction.

1326. You do not think there is any great danger arising from it?—None, whatever. I may state that I have considered this subject since I saw the Waterworks Bill, and I have made several notes on the margin bearing on that subject; and I have come to the conclusion, after considering that portion of the subject, that it is impossible with any advantage to the public, to lay down any arbitrary laws or rules for the regulation of the dimensions of reservoir embankments; for each description of embankment must vary greatly, according to the locality and the nature of the materials to be used, or at hand. In some places, it may be advisable to build a damhead similar to that of the Croton Lake; in others the embankment may be made of clay and earth only, with a pitched facing of rubble stone only, as in England. In some places it may be advisable to sink the puddle trench only two feet into the ground, as in India and in parts of Australia. And in many places a puddle trench may be altogether dispensed with. Where there is a choice of sites, and a foundation of clay, there is no necessity to sink a deep puddle trench to take clay out of the trench, in fact to put clay in, but it is necessary if you have a site where it is all loose rock, or where the foundation is bad, but on a clay substratum, the puddle trench may, in many cases, be dispensed with altogether; and in some cases, a timber and clay bank, like a coffer dam, may be used with advantage.

1327. Then I think the general conclusion from your statement is, that you think that no rules can be laid down?—No arbitrary rules for regulating the dimensions of embankments can be laid down with advantage to the public, and it is advisable to leave to the responsible engineer of the works the choice of the mode to be pursued in each particular case.

1328. I assume that you are opposed to anything

thing like inspection?—Not to inspection after construction; and, to a certain extent it might be advisable to have inspection during the construction of works; but to be of advantage to the public, any inspection during the progress of the construction of the works, should be of a very limited character. You cannot with advantage have responsibility without power; and if an inspector takes responsibility, he must have power; if he is a Government inspector and takes power, the Government of the country might as well make all the reservoirs of the country themselves at once, for that would be a virtual stoppage of all private enterprise.

1329. Do you think it would be advisable that plans of an intended reservoir should be laid before the Home Secretary?—I should prefer that the plans should be laid before a Committee of the House when a Bill is applied for.

1330. My question is, first, whether you would propose that the plans should be laid first of all before the Home Secretary, and that from him that they should go to the Committee which decided on the Bill for the undertaking?—That is a question; because if the plans are laid before either the Home Secretary or the Board of Trade, or any public Board, the projectors of those plans, or the Company preparing those plans, would not be present when the plans were examined to speak for themselves, or to defend themselves, if any thing were stated against them; whereas they would be before a Committee of the House, and could defend themselves if anything were said.

1331. So that you would strike out any notion of submitting them, in the first place, to the Government, but you would go direct to the Committee?—I think it would be safest to go directly to the Committee.

1332. When it has gone to the Committee and has been determined by the Committee, would you, when the bank is constructed according to the law laid down by the Committee, have any inspection, to see whether the conditions of the Committee had been fulfilled?—Inspection during construction would be useful in this respect, that supposing there were any very glaring departure from specifications, or any very glaring departure from the obvious rules of safety, an inspection would be very useful; but I hold the opinion that in the reservoirs constructed in this country, on the puddle-trench mainly depends the safety of the embankment; and if you have an inspector there to see every spade full of puddle put in, that is virtually taking the responsibility of the work; because if responsibility is not taken, what is the use of having an inspector there at all? I think that quite as useful a thing as having an inspector during construction, would be that the engineer for any work should be called upon to make quarterly or monthly reports, and to give a certificate; and that certificate might with advantage be published in the columns of the newspapers in the next nearest town; which would still leave the responsibility with the proper parties, and publicity would be given, which is a safeguard in such cases.

1333. Suppose that an embankment is finished; you have got to inquire whether the law has been followed; in fact, to ascertain whether the embankment is built according to the rules laid down by the Committee; that must be done by some inspection?—Yes; but if an embankment will stand for three months after it has been filled with water, as an ordinary rule, with ordinary care and precaution, it will stand until there is some deterioration.

1334. Supposing that it does not stand, and 200 people are drowned, does not that suggest to you the propriety of having some inspection before the reservoir is filled?—Precisely, there is no objection to that; but there would be rather an advantage in having an inspection of the reservoir after it was virtually completed, and ready for filling with water, and an inspection of it during the progress of filling, or at various times during the progress of filling; still I would always leave the responsibility of filling the reservoir, and the proper way and time of doing so, with the engineer of the works.

1335. Supposing that it should turn out that the inspector sent by the Government should report to the Government that the embankment had not been made according to the rules laid down by the Committee, would you give to the Government the power to say, Do not fill the reservoir?—Yes, I would do that certainly if there was anything glaring.

1336. Supposing that the inpector reported that the rules laid down by the Committee had not been observed, would you give to the Government the power of saying "Then do not fill the reservoir"?—I would, if he reported that the rules laid down had been widely or dangerously deviated from.

1337. You have seen the Bill which has been submitted to this Committee?—I have.

1338. Have you any suggestions to add or take from that Bill?—After thinking the subject over, I have arrived at the opinion that there are certain fixed rules which might, with advantage, be laid down for regulating the manner in which the the site and seat of any embankment should be prepared previously to the building of it; for leading away or successfully combating any springs met with on the site; and I am of opinion that definite rules may be laid down with advantage for regulating the control of the water or streams by which the reservoir is fed or supplied.

1339. When you say that definite rules may be laid down, who is to determine whether those rules have been followed; and if they have not been followed, what is the result?—The person who inspects the reservoir previously to a certificate being given that it is in a proper state to be filled with water.

1340. But then the site has been chosen, and the embankment built, and I thought you were now upon the choosing of the site?—I would let the engineer for the works choose the site; but before the Bill was obtained, the Government inspector might be sent down.

1341. That is, before the site is chosen and before the embankment is begun?—The site would be chosen when the Bill is applied for.

1342. Before the embankment is begun?—Before the embankment is begun, you cannot examine the site afterwards.

1343. You send down the Government inspector to examine the site?—Yes.

1344. Supposing he reports against the site, and that it is a very dangerous site, would you give the Government the power of saying "Then do not build the embankment"?—Yes; upon the whole, I think I should; but the inspector should be examined before the Committee to whom the Bill has been referred.

1345. Then you take that previous step before it goes to the Committee?—Yes.

1346. Therefore,

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1346. Therefore, you give to the Government the power of determining whether the embankment shall be made at all?—Practically it would be so.

1347. That goes a great way in the matter of inspection?—The site, and the preparing of the site, are, in my opinion, the two principal things.

1348. Is the next principal thing the puddle wall?—Yes; but you cannot, in my opinion, lay down any arbitrary rule for regulating the thickness of the puddle wall.

1349. Although you cannot lay down any arbitrary rule, yet, having chosen a proper site, having sent down the Government inspector to determine on that site, and he having reported that the site is a fit and proper one, a man begins to lay his plan before the Committee; do you think that there are not then rules that may be laid down as to the making of that puddle wall, and the thickness and height of it?—I will scarcely go to that extent; because some kinds of puddle will stand twice as much pressure as others; I have put puddle in perfectly dry. I have heard engineers state, that all puddle requires a large quantity of water; and I have seen a statement that loamy clay requires a large quantity of water. My experience leads me to the conclusion, that loamy clay is better put in dry than wet, and that some kinds of puddle will stand twice as much pressure of water as others.

1350. Then, supposing that the engineer determines to make the puddle wall of a certain thickness, and makes it of that thickness, and when the Government inspector looks at that bank so made, he reports to the Government that it is exceedingly dangerous to fill the reservoir, would you give the Government the power of saying that it shall not be filled?—Yes, I would; because I think the Government would weigh the status and position of the inspector against the status and position of the engineer who had constructed the work; and if they thought that the opinion of the engineer who had constructed the work was a better opinion than that of the inspector, they would leave with him the responsibility of filling the reservoir or not.

1351. Supposing the Government to give permission to fill the reservoir under the circumstances, and that in the next week it burst, who is responsible?—I should still say that the Company, or the constructors of the dam, are responsible in the same way as with regard to a railway. I know a case where, a few days after a railway had been opened, a serious accident occurred; but of course the Government inspector could not be held responsible. There are one or two rules which I have put down, namely, the control of the water or streams by which the reservoir is fed or supplied; the size of the waste water weir, or swallow, or cock-pit by which the waste water or flood water is discharged; that any pipe laid from a large storage reservoir for the discharge of its waters shall be in all cases so placed as to be accessible for examination and repair, and the same with regard to sluices; and that in any case where there would be great practical difficulty in constructing a contour channel round each side or the main side of a reservoir, it shall be imperative that, in addition to the pipes of discharge, there be a separate tunnel, or culvert or culverts, calculated to discharge the whole of the flood or storm water that could possibly enter the reservoir, so as to provide against any accumulation beyond the control of the resident engineer. It appears to me that this is absolutely necessary, because an occasion might arise when a reservoir was from five to ten feet of being full, and when the waste water weir was inoperative, which would render it dangerous to allow more water to enter the reservoir.

1352. I think you gave evidence before the coroner at the inquest which was taken in consequence of the bursting of the Bradfield reservoir?—I did.

1353. You were, I think, on the dam very shortly after the catastrophe?—I believe that I was the first engineer on the work after the catastrophe.

1354. You were subsequently employed by the Corporation to examine and report upon that accident?—I was.

1355. Did you examine and report?—I did.

1356. What became of your report?—I made one report, in the first instance, before any examination was entered into. I have a copy of that report here, which I have never seen in print; and with permission I will put it in (*vide* Appendix), I see no reason to depart from anything I said in it.

1357. Is there not a report, to which your name is appended, as a Parliamentary paper, ordered by the House of Commons?—There is; and I will now put it in (*vide* Appendix).

1358. Is that different from this report?—No; it enlarges upon that. There are some things in that which are not in the first. I still hold to every line which appears in those two reports.

1359. The evidence you gave before the coroner is the same as really is contained in the reports?—Substantially. I adhere to every word that I said before the coroner.

1360. You reside, I think, at Sheffield?—I do.

1361. And therefore you have had a good opportunity of knowing the site of the reservoir?—I have a very minute local knowledge of the whole of the district.

1362. What is your opinion as to the mode in which that embankment was constructed, and the wisdom of choosing that site?—There was a difficulty about the site in the first instance; the ground was not good for constructing an embankment upon it; and even the second site was not a good site, although I myself hold the opinion that Mr. Leather, when he altered the site of the embankment from the first to the second, did avoid the influence of the landslip observed on the first site. But there is another point to be considered, namely, that under the stringent regulations which are laid down for the construction of these embankments, an engineer is tied down to a particular line; there are certain limits of deviation which he cannot go beyond; for instance, in that case at Sheffield, he could not go beyond 100 yards from his first site, without going to Parliament for fresh powers.

1363. Are you quite sure that you are accurate?—Yes. I know the Waterworks Clauses Consolidation Act, and all the general Waterworks Acts, almost by heart. It is very desirable to give companies far greater powers, and this Bill ought to provide for giving them such powers.

1364. You conclude that Mr. Leather had not greater power of deviation than that which was taken by the Bill?—He went to the fullest extent of the limits of deviation.

1365. Even when he had gone to the extent of the limits of deviation, you think the site was hardly

hardly a safe one?—I should not have hesitated to have made an embankment there, and I should not hesitate to repair that embankment.

1366. What was the cause, in your opinion, of the accident?—The cause was water getting under the outside slope, and the seat of the bank under the outside slope not being drained in such a manner as to allow the water to get away from underneath; the consequence was, that the water got down under the loose strata until it came on to the rocks below, and the dip of the rocks was a steep angle. It was exactly like the launching of a ship; the ship is laid on an inclination, a little more pressure on the inside, and a little more lubrication of the ways, and the ship is launched; and that bank was launched in the same way. I have not the least doubt of it.

1367. You have heard the theory of the landslip?—I have; and there was, no doubt, a landslip.

1368. You think the landslip had a good deal to do with the slipping of the bank?—It all hangs upon whether the landslip outside the bank was a slip which occurred immediately before the bursting of the reservoir, or whether it was a landslip which occurred immediately afterwards. There is no doubt whatever that a slip under the embankment occurred during the same night; in fact, when I examined the embankment the following morning, I was so impressed with that fact, that I wrote a letter to both the daily papers in Sheffield, stating that to have been the cause. But the question is, whether it was an unavoidable landslip, or whether it was a landslip which was occasioned by something else. My opinion is, that it was a landslip caused by something else, and that if you removed that cause, the embankment might be restored in the same place, exactly as the Holmfirth embankment is restored in its old place.

1369. That "something else" you suppose to be water?—Yes.

1370. You fancy that, if that water is carried away, the embankment may be safely made where it was?—Precisely; and I should not hesitate to contract to do it, and to guarantee its safety. The Holmfirth embankment is restored on the same site. The only thing is, that the Holmfirth embankment gave way because the spring underneath was not efficiently removed; and since it gave way, drains have been laid under the site of the bank, which do efficiently remove the water, and prevent its coming in contact with the earth of which the bank is composed; and the embankment of the Holmfirth Reservoir stands now exactly on the same site; the main difference being that it is not quite so high as it was.

1371. In your inspection of the Bradfield embankment, you saw the puddle-wall?—I did.

1372. Do you think that puddle-wall was properly made?—Better puddle I never saw in my life.

1373. You cannot imagine that the insufficiency of that puddle-wall at all caused the catastrophe?—Certainly not; and I may, perhaps, give a practical reason which will bring it home. It is common, in many shallower reservoirs, to rely on a sheeting of puddle on the inner face of the bank. I know many reservoirs, not above 40 feet or 45 feet in depth, which are puddled on the face of the bank by puddle three feet and four feet thick. If puddle three or four feet in thickness will stand a pressure of water of 45 feet, doubtless puddle 16 feet in thickness will stand a pressure of 90 feet, the puddle being equally good in both cases.

1374. Doubtless, you heard Mr. Rawlinson's evidence about those iron pipes?—I did.

1375. Do you agree with his theory about the cause of the catastrophe?—It is very difficult to tell how the water did get there; but I conclude that if water did get under the outside slope of the bank, if the site of the embankment is properly drained, so as to protect the earth of the bank from coming into contact with the water, you might safely construct a reservoir, so to speak, over the Thames itself, the Thames running underneath. There is a large stream of water running under the Holmfirth bank at this present day; and I know numbers of reservoirs of that kind. I know a reservoir in Australia, where there is a large stream running from under the bank; and it is perfectly safe so long as it is watched, and the water is not allowed to come in contact with the earth.

1376. That drainage which is made would have been a sort of channel to carry off the water under the embankment?—Precisely; and supposing the water which occasioned the slip at Bradfield was surface water, still, if at each end of the embankment there had been a drain to divert the water coming under the seat, the embankment itself would have been perfectly safe from that danger.

1377. Mr. *W. E. Forster.*] I understood you to state, that you do not agree with Mr. Rawlinson that the depression of the pipes underneath the embankment caused the water to come through and to loosen the rubble in the inner slope?—I think it is possible and probable that water leaked along the outside of those pipes, because I know another reservoir in the immediate vicinity of Sheffield, at Dunford Bridge, which is lying in ruins (and it is a very large reservoir) at this moment; and it was lying in ruins at the time the accident at Sheffield took place from that cause; I know that, because I examined that reservoir myself professionally, for parties interested in property on the River Don, and I am myself interested in a mill on the Don, and therefore I examined it very minutely.

1378. Did you hear Mr. M'Clean's evidence?—I did not.

1379. Have you heard of his suggestion, that the cause of the accident was a clay stank which was left on the top of the reservoir, and interrupted the flow of the bye-wash?—I have seen that in Mr. M'Clean's report, but that could not have been the cause.

1380. You do not agree that that was the cause?—It is impossible that could have been the cause, because the water never reached the top of the masonry.

1381. Did you examine the embankment carefully, to ascertain whether it failed at the bottom or gave way at the top?—I did; and I made certain that it did not fail from any cause operating at the top, because when I arrived at the Bradfield Reservoir there was the high-water mark of rack the same as rack on the sea-shore, which ran in an even straight line about six feet from the top of the embankment, which showed me that the water never washed over the top till after the bank slipped and settled down, and then only over a portion of it.

1382. Did you ascertain what was the height at the extreme high-water mark?—It was about five feet six inches from the top.

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1383. How much water would the bye-wash have discharged, with a depth of water of 12 inches flowing over it?—About 14,000 feet per minute with 12 inches; 24,000 feet per minute with 18 inches; and about 39,000 feet per minute with 24 inches.

1384. What was the greatest amount of water it could be called upon to discharge?—The greatest flood registered, I think, is about 38,700 cubic feet per minute. You cannot lay down any arbitrary law for regulating the size of the bye-wash from merely knowing the drainage area into the reservoir, because if the sides of the drainage area are very flat, the water will be a long time in flowing off, but if the sides of the drainage area are very steep it will flow off very rapidly, and require a larger bye-wash. Again, if the subsoil is clay, the water will run off quickly; but it may be of a very porous nature, and take in the water and give it out gradually. Gauging the stream is the only thing by which you can determine what should be the area of the bye-wash required.

1385. Will you again, in as few a words as you can conveniently use, give your definition of the cause of the accident?—I have not the least doubt that the cause of the accident was water getting under the outer seat of the embankment on the outside of the puddle-wall.

1386. How do you think it got there?—It is impossible to determine that. It might have got through a rupture of the puddle-wall, or it might have got there through a fracture in the pipes, or along the outside of the pipes, or from the springs, or surface water. I do not think the pipes were fractured, and I do not think there was any serious leakage from the joints; but still a very small leakage persistently going on would be dangerous when the site was not drained.

1387. Do you think it got to the outside of the puddle-wall near the bottom, or to the top of the puddle-wall?—It could not get through at the top; it would get through at the bottom.

1388. Near the bottom?—It would either get through just at the surface of the ground, or underneath the surface of the ground.

1389. You do not think it was a fault in the puddle-wall?—I am inclined to think it was not a fault in the puddle-wall, *per se*.

1390. But that it got either over it or underneath it?—It is probable that it either got through it about the ground-line or underneath the ground line; but still it is possible that the mere surface water getting in might have been the cause, because the site of the bank was not drained. If it had been drained it might have taken a very serious leakage from the pipes safely.

1391. Then the Committee are to understand that, notwithstanding your great experience, you are not able to state any positive belief as to the cause of the accident?—I state positively that water getting under the outside slope was the cause, but how the water did get there it is impossible to state, because there are several different ways in which the water might have got to that point.

1392. You stated before that you thought there had been a land slip, but that you did not know whether it was before the accident or afterwards. If the land slip occurred before the accident, would that have been a sufficient means by which the water would have got through?—That would be sufficient to account for it altogether; but my opinion is that on adopting the second site the influence of the first observed land slip was avoided; and you will recollect that the embankment failed at the precise moment when the reservoir became practically full for the first time, which would be, to say the least of it, a very singular occurence and coincidence if the failure occurred from some cause external to the reservoir.

1393. Supposing that it was not caused by a land slip, what do you think is the most probable cause that would have produced it?—Nothing could have produced it except the giving way of the foundation of the bank, or a land slip exteriorly.

1394. It must have been either a land slip or a giving way of the foundation?—Nothing else would have done it so completely, and in the manner that it did occur.

1395. Was there anything on your inspection which led you to suppose that it had been a giving way of the foundation?—Yes. I have not the least doubt it was a giving way of the foundation, and that the land slip that occurred on the outside of the bank was occasioned in the following manner:—that immediately the bank gave way the scour of the water washed away a portion of the earth at the foot of the hill on the immediate outside of the embankment, and that the soil of which that hill was composed, being in a state of saturation, from the surface rains, there was in that hill a predisposition to slip; and, the bottom of it being removed or scoured away, it flew to pieces immediately, in the same way as may be seen in railway cuttings.

1396. If you had made that reservoir, how would you have guarded against that slip of the foundation?—I should have drained the site. I should have laid drains entirely under the site of the embankment, on the outside of the puddle; I should have made a sort of honeycomb of drains, and that is the greatest precaution that can be adopted in making a reservoir embankment. In fact, there are two great rules: to drain a site as George Stephenson drained Chat Moss, by which he made unsound ground into sound ground; and to puddle, in the manner followed by Thomas Telford.

1397. You do not suppose that the pipes had anything to do with the accident?—I am rather inclined to think there was a leakage along the outside of the pipes. I know many instances where that has occurred; and there is an analogous case of the reservoir at Dunford Bridge, which is lying in ruins at this present time; and there are many cases in that district of leakage along the exterior of pipes.

1398. I suppose you would not think it arose from these pipes having got out of repair at all?—The pipes are not broken; I think there cannot be a doubt of that. I think there cannot be any very serious leakage from the joints themselves, or otherwise it would have been detected during the test that was applied.

1399. I should like to ask you a question with regard to evidence that has been given before the Committee; eminent engineers have informed the Committee that there is no danger of iron pipes falling out of repair, however long they might remain; is that your opinion?—I have given my opinion in writing, that "it is possible; I have no doubt that pipes may last 50 or 60 years, perhaps more; but on the other hand I have myself known pipes that have been laid

laid in clay, or puddle, which was impregnated with ammoniacal salts, eaten away and destroyed by the action on the outside in less than five years."

1400. Then would you think this requirement, which was suggested by Mr. Rawlinson, one that ought to be carried out: "cast iron pipes, culverts of timber, or other material liable to decay, shall not be used for outlet discharge, or for overflow works, if required to be buried under or within any reservoir embankment in such manner as to preclude repairs and endanger the structure by decay?"—I do not think that any engineer of reputation would ever again do such a thing.

1401. They were so placed in the Bradfield Reservoir, were they not?—Yes; satisfactory examination cannot be made inside a pipe of 18 inches diameter.

1402. It is quite contrary to your opinion and your experience, that it is safe to put iron pipes in such a position that access is not easy to them?—I do not think it is safe to put them in places where they are inaccessible; they may go at any moment.

1403. Mr. *Beecroft.*] Do your iron pipes sometimes suffer from corrosion?—They do.

1404. And do they in consequence become perforated with small holes, which causes leakage?—That would occur in process of time, as may be seen in pipes taken out which have been under ground for many years. There is another point, that iron will decay in pipes as it will on the bottom of ships. It is within my own knowledge that, after one of the voyages of the Great Britain steam ship, a man could positively push his finger through the bottom; the iron was eaten away until it was no thicker than the thickness of a wafer; there was only that thickness of iron between the destruction of the ship and 500 or 600 lives.

1405. Would that occur with pipes in a similar manner?—A population living under a reservoir with pipes so situated that they cannot be examined, are sleeping on a volcano.

1406. Have you seen pipes after they have been in the ground a great many years and examined them?—I have. I have found them corroded, and I have seen them by the action of water running along the outside, eaten away as though a ploughshare had been run along them.

1407. I understood you to say that you might safely have pipes in water 50 or 60 years?—I said that I have no doubt it is possible for pipes to last 50 or 60 years.

1408. Does not that depend on the thickness of the material used?—Yes; it is unsafe to place them in a position where they cannot be examined.

1409. Mr. *W. E. Forster.*] Have you any further remarks to make with regard to the cause of the accident at Bradfield?—I am satisfied that what I have said was the cause, and that it could not have occurred in any other way.

1410. Mr. *J. Tollemache.*] You say that, provided it was not caused by a land-slip, it was caused by water getting into the embankment?—Getting under the embankment, and the foundations consequently gave way.

1411. You are not quite sure whether that water came along the top of the pipes?—No.

1412. Do you think it might have been produced by springs?—It might have been produced by springs. The one omission of the safeguard of draining the site on which the embankment was built, would allow any of the causes I have named to operate to the destruction of the reservoir.

1413. You say that site was not properly drained?—Yes.

1414. It ought to have been drained?—It ought to have been drained by a series of drains, the same as a honeycomb.

1415. It was not drained?—It was not drained, so far as I could learn.

1416. Mr. *W. E. Forster.*] Have you seen the requirements which Mr. Rawlinson suggested should be proposed for reservoirs to be hereafter constructed, and which have been handed in to the Committee?—I have seen them since I have been in the room, not before.

1417. I understood you to state that you were of opinion that certain rules could be laid down for the construction of reservoirs?—Yes; I gave those short rules as far as I think it is possible to lay down any rules of such a nature as to be practically serviceable.

1418. Would you lay down any rule with regard to the width of the puddle-wall?—I would not.

1419. Would you lay down any rule with regard to the slope of the embankment?—I would not.

1420. Would you lay down any rule with regard to the width of the top of the bank of the reservoir?—I would not.

1421. Not on a sliding scale, as Mr. Rawlinson has proposed?—No, I would not.

1422. Would you lay down any rule with regard to the height of the top bank level above the edge of the byewash?—I think it is possible to lay down a rule for that with advantage.

1423. Will you run your eye over Mr. Rawlinson's 10th suggestion, and say whether you agree with it?—Yes; I am inclined to agree with that.

1424. With regard to the 11th suggestion, "Each impounding reservoir shall have full and free bye-wash space, not less than three feet in length for every hundred acres of gathering ground;" would you lay down such a rule?—As I have already stated, in substance, it is almost impossible to lay down an arbitrary rule for the construction of a byewash; because on the same area of drainage you may have a necessity for twice the size of bye-wash, according to the inclination of the slope of the gathering ground; it is the gauging of the stream by which alone you can determine the area of the byewash necessitated.

1425. The 12th suggestion, with regard to pipes and culverts, I understood you to say, you agree with?—Yes.

1426. You have stated that you do not think that several of these rules are necessary; are there any rules which are not mentioned that you would suggest with regard to construction?—I do not think that Clauses Nos. 1 and 2 suggested by Mr. Rawlinson are absolutely necessary.

Clause No. 3 would be mischievous, for it would not be possible in every case to produce a record of the fall of rain for seven years preceding the application of the Bill.

With regard to Clause 4, I am of opinion that it is unnecessary to put a company or body applying for an Act to this expense, and that until an Act is obtained, it should not be compulsory on the applicants to sink trial shafts.

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Clause 5, for the reasons already specified by me, is unnecessary, and might be mischievous.

Clause 6 is objectionable.

Clause 7, for the reasons already specified by me, is unobjectionable.

Clause 8, the like remark applies to this clause.

Clause 9 is inapplicable, and does not harmonise with Clause 7, for if the puddle of a puddle-wall be not less than 10 feet thick at the top, the top width of the bank must be more than 6 feet wide.

Clause 10, I am inclined to agree with Clause 10.

Clause 11 is inapplicable. The true test of the area of the byewash required is the guage of the stream.

Clauses 12, 13 and 14 are, however, the most important, and I agree with Mr. Rawlinson that these clauses, or clauses to the same effect, ought to be inserted and insisted on.

I am further of opinion, that in addition to the rules already suggested by me, there should be a clause providing that, besides the means of controlling the water entering or flowing from a reservoir already alluded to, there should be extra sluices, of such a calibre as to be able to lower the water in any reservoir from its top water-level at least one foot in each half-hour. This discharge should be by sluices in masonry or by a regulating byewash.

A regulating byewash, or means of discharge such as I have indicated, would, in my opinion, have prevented any loss of life at Bradfield, and would have been the means of preserving most, if not all, the property destroyed.

The first suspicion of danger in this case occurred at about seven in the evening, and the bank gave way about five hours after, consequently, had there been the means, there was the time available for lowering the water 10 feet, and such a diminution of depth would most probably have saved the whole; but even if it had not had this effect, it would so much have diminished the quantity of water in the reservoir, that the flood would not have risen so high, and every foot taken from the reservoir would have diminished the danger. The flood rose in some places 16 to 18 feet, and practically, it occupied one hour in the discharge; consequently anything which would have prevented it rising more than say 6 feet, and would have caused it to have occupied say six hours in the discharge instead, one would have been of inestimable service; and in the absence of a regulating byewash, this could have been done by cutting a trench near the byewash, as already suggested by me in my Report.

I am further of opinion that the proprietors of all large storage reservoirs which have pipes laid under their embankments in such a manner as to be inaccessible, should be compelled forthwith to remove them or permanently to block them up, and to provide other means for the discharge of the water.

I am further of opinion, that the proprietors of all reservoirs constructed for the purpose of storing flood or rain water, or spring or stream water, or for any other purpose than the holding or receiving of water pumped up by machinery, should be forthwith compelled or called upon to give a certificate under the hand of the principal engineer, as to the safety and general condition of the whole of the reservoirs under their control; that the certificate should be made public, and renewed monthly.

I am further of opinion, that the proprietors of any reservoirs from which any leakage of water is issuing, or within 100 yards on the outside of whose embankment any discharge or flow of water appears, should be forthwith called upon to report the same in writing to the Board of Trade, and to publish a copy of the report in one or more of the papers published in the next nearest town where a newspaper is printed, and that such report shall state distinctly the nature and cause "so far as can be ascertained" of such leakage, and whether any danger is to be apprehended therefrom; and that until such leakage has been effectually stopped, a further fortnightly report shall be forwarded and published as before described, and that such report shall be signed by the chief responsible engineer on each occasion.

There should also, I think, be a sweeping clause exempting the proprietors of all reservoirs which are supplied by pumping machinery, and the proprietors of all reservoirs of less than half-an-acre of water surface or 12 feet in depth from the provisions of this Act, but causing it to embrace the reservoirs of canal companies and canals themselves.

1427. I understood you to say that you would advise inspection during maintenance?—Yes; I think so.

1428. Who do you think ought to be employed as inspector?—The choice of the inspector is the great difficulty, because you must avoid appointing as inspector an engineer who is in practice on his own account.

1429. And yet I suppose you would think that he ought to be a competent engineer?—He ought to be a competent engineer. Such a man as would be competent to undertake the duty of inspecting the reservoirs of this country, is a man whose practice is worth to him 5,000 *l.* or 6,000 *l.* a year, I imagine.

1430. Did you hear that part of Mr. Rawlinson's evidence in which he drew a great distinction between the competency that would be required from an inspector who went down to ascertain whether certain rules had been adhered to in the construction, and the competency of a man who would be able to go and make an annual inspection to see that it was in repair. Mr. Rawlinson seemed to think that a man of less acquirements would do in the second case, than in the first; do you think so?—No; in that case I should rather prefer to rely on a published monthly report of the resident engineer or chief engineer of the works.

1431. You mean for construction?—Yes.

1432. Mr. Rawlinson's suggestion was, not that the Government Inspector should ascertain that the work was being performed according to the rules that were laid down, but that after it had been performed he should go down and see whether certain things, such as a certain height of a puddle wall, or a certain height of the byewash were kept to, or not. You would propose to ascertain whether any rules of that kind on which you might agree with him were followed, by sending down an inspector, would you not?—Yes.

1433. You think that a monthly report during construction, would be a better check upon the construction than any attempt by the Government Inspector to see that the works were being properly executed?—I do not see how you could have Government inspection during construction, unless the inspector were constantly

stantly residing on the works; and the constant residence of an inspector on the works would necessitate an inspector for each reservoir; and in that case the Government might as well take the construction of all the waterworks in the country into their own hands.

1434. You agree with Mr. Rawlinson that the Government should take care not to take upon itself any responsibility during the erection of the works?—If a man is worth anything, he is never afraid of responsibility, if he is put into an office.

1435. Do you agree with Mr. Rawlinson that no man ought to be expected to take such a responsibility, who had not also the power of getting his orders carried out?—Yes. Any man who will take responsibility without power, I look upon as *non compos mentis*.

1436. You say that in America the inner slope was very often almost perpendicular?—Almost universally.

1437. You did not hear Sir Arthur Cotton's evidence, in which he seemed to think that it was quite necessary that there should be a certain angle?—That is for earth and clay embankments. The inner slope of an earth and clay embankment is, as reservoirs are generally constructed in England, the support of the puddle wall. On the puddle wall depends the security of the reservoir in most of the reservoirs in this country, and the other things are all subsidiary to maintaining intact and in good condition the puddle wall itself.

1438. Then you think that a masonry wall can be erected to be quite as strong a support to the puddle wall as a slope would be?—Undoubtedly. It is a question as to the material at hand, and the labour.

1439. You have had to do with the making of a good many reservoirs in Australia; does the Government exercise any control over the making of them?—They do.

1440. What control?—Most of the reservoirs there are constructed by Government.

1441. In cases in which they are not constructed by Government, what interference is there?—No interference, whatever.

1442. Do you know whether there is any interference in America?—I think there is a State interference.

1443. You do not know to what extent?—I do not.

1444. Have there been any accidents in Australia causing loss of life?—Not causing loss of life. In the largest reservoir which I constructed myself, the pipes gave way; and had I not had valves on the inner side of the pipes, that embankment and that reservoir would have given way, and had there been a densely peopled district below, it would have done infinitely more damage than the Sheffield reservoir, because it held 6,500,000,000 gallons, and was nearly full at the time.

1445. Have you always used a puddle wall in every reservoir that you have made?—Always. I know many cases in this country where there is no puddle wall in the heart of the embankment, but where the face of the embankment is puddled with a thin layer; but there are many reasons why that is not so good as a puddle wall; they are always getting out of order when used for deep reservoirs; and it is certain as a general rule that they are adopted as a patching up of a bad job in the case of deep reservoirs.

1446. Is the danger from sudden floods in Australia greater than it is in England?—I have known seven inches of rain to fall in 24 hours; but at the same time, there is a wide choice of sites, and you are not tied as in England to a difficult site.

1447. Mr. Rawlinson was asked whether he would advise any inspection before choice of site, and he said that he would not. I understand you to say that you would advise inspection before choice of site?—I think I should do that. It is very desirable in this Bill to give all private companies large additional powers with regard to the limits of deviation. I think, at the present time, they are tied down in a very injudicious manner; in fact, there are many clauses in the Consolidation Act which require alteration.

1448. You would suggest that, in taking power to obtain land, they should have power to obtain a greater width of land than is at present the case?—Yes; and that they should not be tied down to construct the embankment on the site originally chosen. If, during the progress of the sinking of a puddle-trench, for instance, a large body of water is encountered which renders it desirable to remove the bank, I think they should not be tied down to place it within 100 yards, and that they should have power to move it a quarter of a mile, if necessary.

1449. You are, of course, aware that if they obtained such power, they would be obliged to make arrangements with, or to incur the opposition of the landowners in the district?—I am aware of that; but still I think that making Clauses 4 and 5 more comprehensive, and giving companies more power than is provided, would meet the object.

1450. That, of course, would very much increase the expense of the undertakers in getting their Bills, because they would have to incur, possibly, the opposition of so many more landowners; do you think that it would be impossible for them to find out, before they began actually to make their reservoir, where they ought to put it?—That is almost impossible, although you may make borings; borings are valuable to a certain extent in ascertaining the nature of the site; but trial shafts and trial holes are much more valuable, because they enable you to detect any imperfection with much greater accuracy; it is quite possible to sink a trial shaft at one spot, and another 100 feet away, and in running out the puddle trench between the two to encounter or cut through water-bearing strata, which would cost you 5,000 *l.* or 6,000 *l.*

1451. Are the Committee to understand that you would suggest that the clause, which there is now in Waterworks Acts generally, giving power to deviate from the line laid down on plans, but not more than 100 yards, should be enlarged?—Yes; enlarged to a quarter of a mile in the general Act, leaving any curtailment to be provided for in each special Act.

1452. Have you any suggestions to make with regard to the power given to residents, near or under a reservoir, to apply to magistrates?—I think that it is desirable to alter all those clauses in the General Waterworks Act, which vest authority in two justices by giving it to a jury empannelled before two justices, as being a much more satisfactory tribunal.

1453. Can you state any reasons on which you ground that suggestion?—I think that if 12 men are empannelled before two justices, it is much more

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more probable that you will meet with a full and fair inquiry, and that you will obtain an unbiassed and unprejudiced judgment.

1454. Can you or not show it to be the case that in many instances the undertakers of a reservoir may be resident within towns, and that the justices being county justices, and not connected with the town, a jury would be thought by both parties perhaps a more impartial tribunal?—Yes; I think that in all cases a jury would be found a more impartial and satisfactory tribunal.

1455. Mr. *J. Tollemache.*] You advocate the plan of having a puddle wall in all embankments?—In all embankments; it is not necessary, in all cases, to carry the puddle wall down into the ground, because, if you have a choice of site, as in India or Australia, and you are constructing the reservoir bank on a clay sub-stratum, there is no object in cutting a trench 50 feet deep.

1456. Generally speaking, in England, you advocate there being a puddle wall?—Invariably.

1457. And that is the most important part of the embankment?—Yes, everything depends on the puddle wall.

1458. And on the way it is constructed?—Yes.

1459. You are aware that other engineers think that it is not desirable there should be Government inspection during construction?—I think that practically it will be found unworkable.

1460. You agree with them that it is not desirable to attempt to have inspection during construction?—I do; beyond seeing that the few rules which I have suggested have been carried out.

1461. You approve of inspection after construction?—I do; inspection of management.

1462. Do you approve of inspection after construction, before the strength of the embankment is tested, by the reservoir being filled?—I approve of that.

1463. How can there be efficient inspection unless the inspector sees that the puddle wall has been properly constructed?—There cannot be any thorough and satisfactory inspection except by a man who has seen the whole of the work from the commencement to the finish; and, therefore, I say that a monthly certificate or otherwise of the resident engineer or chief engineer is the most satisfactory thing.

1464. Do you think that a monthly report from the engineer would be more valuable than inspection after construction?—I do; because you find very few resident engineers who do not understand the subject better than any inspector who would be likely to be sent down.

1465. Supposing that monthly reports were made by the engineer himself, would you have that monthly report published in newspapers, or sent to the Home Office, or to the Board of Trade, or both?—Both; it would show whether the works were progressing in a satisfactory manner, and by publicity the attention of the shareholders and directors of every company would be drawn to it monthly. That is the course I always pursued in Australia.

1466. In order to insure that monthly report being made, would you subject the engineer to any penalty if he did not make it?—I would subject the company to a penalty; and if their servants did not comply with their orders, they would inflict a penalty on them.

1467. You think they should be subjected to a penalty if the monthly report were not made?—Precisely. I would leave them to deal with their own officers. A monthly report would be much more satisfactory than any Government inspection during construction.

1468. Mr. *Beecroft.*] Are you aware that, in India, embankments are not made by the erection of puddle walls?—I am.

1469. Are you aware that they are made simply with loose earth?—Yes.

1470. And that loose earth is allowed to settle down?—Yes. I have resided in Australia with several Indian officers, and I am perfectly aware of the whole method pursued in India; a Major Cotton, who is, I believe, now Sir Arthur Cotton, went over some of my works in Australia during the time I was there, and I also had some conversation with him on the subject.

1471. Are you aware that the embankments which are made in that mode in India seldom or ever give way?—Yes, I am aware of that; but if you made a general rule to the effect that reservoirs in England should be made after the Indian fashion, it would be virtually a prohibition to making reservoirs at all.

1472. Do you prefer a puddle wall to a wall made of loose earth?—In this country what is generally understood as the Indian system is not generally applicable. I do not believe that in the whole of India there is to be found a single reservoir (I am not speaking from personal observation) with so difficult a site as the one at Bradfield.

Veneris, 16° *die Junii*, 1865.

MEMBERS PRESENT:

Mr. William Edward Forster.
Lord Richard Grosvenor.
Mr. Hibbert.
Mr. Kendall.
Sir John Ogilvy.
Mr. Roebuck.
Mr. John Tollemache.

JOHN ARTHUR ROEBUCK, Esq., in the Chair.

Mr. James Leslie, called in; and Examined.

1473. *Chairman.*] You are a Civil Engineer?—I am.

1474. Have you been especially employed upon dock and harbour, and waterworks' engineering?—Yes.

1475. I think you were employed by the Corporation of Sheffield, to report on the cause of the late accident which occurred to the Dale Dyke Reservoir?—I was.

1476. What was the effect of that report?—I reported that I thought that the work was not sufficient; that it had not been done in a proper manner, and in the way that water embankments are commonly made.

1477. In your judgment the work was faulty?—I think so.

1478. Who do you think was answerable for that?—I do not know the details; it was either the engineer or contractor, or both. My way of judging of the nature of the work was from seeing another reservoir being constructed in the neighbourhood which was half finished; of course I could not see the construction of the Dale Dyke Reservoir, but I saw the Agden Reservoir going on, which was from the same specification, and I thought that it was being done in a very insufficient manner.

1479. Will you point out in what way you suppose it was insufficient?—By the specification it was to be done in layers of three feet; that is much too thick for the layers of a water embankment; but instead of being made three feet, they were being made in layers from waggon tips, like a railway embankment, of six feet or seven feet high; it is totally impossible for any one to pound this stuff down and make it all solid when it is done in such depths as that; it was being made of quarry rubbish.

1480. Do you thiuk that if a competent engineer had constantly inspected that work, he would have altered the mode of operation?—I think that any engineer, much versed in reservoir making, would not have allowed that work to go on. I know, however, that there is a great difference of opinion; others think that it is quite good.

1481. Have you ever directed your attention to what degree Government inspection might be employed, without injuring the public, through diminishing the responsibility of the companies, and at the same time increasing the safety of the public by insuring the goodness of the work?—I think it would be very proper that some competent person should see generally into the style of work, and see what the specification was; if he saw the specification before the work was done, and if he saw the work while it was being done, of course so much the better.

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1482. Supposing you had been sent down by the Government to inspect the site of that reservoir beforehand, do not you think that you would have been able, from your engineering skill, to judge whether it was a safe and proper thing to build a dyke there to make a great reservoir?—I cannot answer that question. The point as to the land-slip had not been raised when I saw the reservoir, and I did not turn my attention to that; I did not think of such a thing, and I have not seen it since that question has been mooted.

1483. I suppose, that being an engineer employed in the making of harbours and reservoirs, you have acquired a good deal of geological knowledge?—It would require that. I would not however trust entirely to geological knowledge. For a large reservoir of that sort, I would have the ground properly pitted.

1484. That is, you would bore holes?—Yes, and pits to see the nature of the stuff below. You may have a land-slip so very old, that there ceased to be any indication of there having been a land-slip. I have had to dig away a thing of the sort myself, after it had escaped observation.

1485. Supposing that inspection of places had been made beforehand, and the Government Inspector had gone down and made a proper inspection, do not you think that those things would have been to a certain degree a security to the public that the work would be well done?—I think it may be some use to have a competent person to see that it be properly done.

1486. Have you ever considered whether that would, in any way, diminish the responsibility of the Company?—The tendency would be so, I think.

1487. Do you think that the inspection which is now exercised over steamers by the Government, diminishes the responsibility of the Company or the proprietors of the steamers, so that it would be fit for the work it is intended to perform?—I believe that, legally, it does not diminish it in any way, but I think there is a good deal of difference between reservoirs and steamers or railways, because there are few things in railways or in steamers which cannot be seen afterwards.

1488. I have always been puzzled by the difference

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difference that you draw between a railway viaduct, which is built on high arches, which must rest on the ground, and the embankment of a reservoir. Would not the same difficulty exist as to the security of the ground in your being able to see it, as would exist in the case of an embankment?—I think not exactly. Take the case of two embankments, a railway embankment and a water embankment.

1489. I ask you to confine your attention to a dyke or embankment of a reservoir, and a railway viaduct, where the arches are built into the ground, and the dangers in the ground are exactly the same as the dangers in the dyke of a reservoir?—I think that in a viaduct you generally can see whether there is any element of danger. As to the strength of the arch, you can judge of that.

1490. I am directing your attention to the foundations?—I think that, generally speaking, a viaduct which is not fit to bear the weight of a train, in addition to its own weight, is not safe for its own weight, and would show symptoms of weakness without the weight of a train.

1491. Suppose, for example, that the foundations of the arch were in ground similar to that on which the Dale Dyke rested, would you be able, after the arch was built, to see into the dangers that might lie under the archway, any more than you would the dangers that might lie under a dyke?—I think you might. I think the two things are very dissimilar. If you had a doubt as to the foundation of your railway bridge, you could ascertain whether it were good or bad by boring alongside of it; but you cannot do that in the middle of a water-tight embankment. An embankment that is meant to be water-tight may stand well enough, and yet might not be water-tight, and the escape of water might disturb the foundation.

1492. Might not a railway arch look very strong, and yet may be on unsound ground?—As soon as it was built it would show itself, if it was built on unsound ground.

1493. How would that show itself more than in the case of a dyke?—You would see it by the sinking of the piers, if the ground was unsound.

1494. Would not you see it by the sinking or twisting of the embankment, if there was unsound ground under the embankment?—You may have ground under an embankment that will not actually go down under it, but still may be pervious, and the water come through it. I think there is a great difference between a structure that is meant to hold water, and one which has merely to bear a vertical weight upon it.

1495. When you inspected Dale Dyke, was your attention at all directed to the pipes running through the dyke?—No; I have not seen it since the pipes were opened up at all. It was within a very few days after the accident that I went to see it.

1496. But the pipes are not more opened now, are they?—I saw a statement in the newspaper that they sent a man through the pipe, and that he had placed candles along it, and found that it was all strait, and that he examined the joints, and found that they were all correct.

1497. Do you think that it is a safe thing to drive pipes in that way under an embankment?—As a rule, I think not; but at the same time I do not think that the pipes were the cause of the accident. There were no inner sluices at this reservoir, and therefore the pipes were standing full of water. If the pipes had burst or driven in the joints, the water would have been seen running alongside of them, and coming out at the other end, and nothing of the sort was ever seen; they were obliged to open the sluice at the lower end, to let the water escape.

1498. Then you think that persons who suggest that that was the cause of the accident, are mistaken?—I think so, decidedly.

1499. Will you state distinctly, of what was, in your opinion, from the inspection that you made, the cause of the bursting, besides the pervious nature of the embankment?—I cannot gainsay the statement that there was a land-slip, because I have not seen the place since, and my attention was not called to it; but I attributed it to imperfect work. There is clay puddle in the centre; clay is the substance that makes the thing water tight. I think that the clay should not be allowed to be against a quantity of loose rubbish sort of stuff, but that the embankment should be pounded hard, and in some degree made impervious.

1500. Do you think that there would have been greater security by having sluices outside and under the embankments, through the solid earth?—I think that, when it can be done, the best thing is to make a tunnel through rock; if you cannot do that, I think the next best thing is to make a good large archway in the solid ground, if you can get it, instead of through the embankment.

1501. Do you think that engineering skill at the present time would suggest that no large reservoir of that sort should be made without an outlet of the description you have given?—I think so; I think it is necessary during the construction, because if you have not a large opening below to allow floods to escape, you have a chance of your reservoir being washed away before it is finished; for, until you get to the top and get a waste weir for the flood water to run over, you have no security that your embankment will not be overtopped any day, and washed away, unless you have got a large opening below to allow the floods to escape.

1502. That form of making an embankment could be provided for by inspection on the part of the Government, because they might say, "Unless you assume that form we will not sanction your making an embankment in that place." Do not you think that would secure the public?—Yes; but, at the same time, I do not think it would be right to make a general rule for that. There are many cases where that is not required. There are cases where, for instance, a reservoir is not in the line of any stream but where the water requires to be diverted from the stream and brought to the reservoir. In such a case as that, as, for instance, in the case of the Dundee reservoirs, they are not on the line of the stream; the water is brought artificially to them, and there is no need of such a provision there.

1503. I suppose you had command over the water before it came into the reservoir?—Yes; the reservoir was made before the water was brought to the reservoir.

1504. You had command over the water before it got into the reservoir?—Precisely.

1505. That is to say, you could say that so many gallons per hour should pass, or so many more?—The water ran down its natural course until the reservoir was made. After that it was brought

brought by a cut, or aqueduct, out of its natural course, and into the reservoir.

1506. So that you had perfect command over the water before it came into the reservoir?—Yes.

1507. But, supposing a reservoir to be such that you had no command over the water before it came into the reservoir, and that there was a long line of river down which the wind, as well as the water, could come, do not you think, in that case, that common prudence would suggest that there should be an escape for the water large enough to give you command over the reservoir?—Yes; I think so, decidedly; at the same time, there is another way of doing it which has been adopted; and cases may occur where it may be the best plan to adopt; sometimes a temporary course is made for the water round about the reservoir, above the level of the waste weir.

1508. That is, in fact, to make a stream by the side of the reservoir?—Precisely.

1509. And that would give you command over the water?—It would.

1510. As a general rule, should you not say there ought to be precautions taken to give you perfect command over the water?—Yes.

1511. And that any engineering which left out that command would be a mistake?—I think so.

1512. Could not the Government, by inspecting, provide that a precaution of that sort should be taken?—They might; but I think that instead of making any general enactment that that should be done, it might be seen, by inspection of the plans, that some such provision were adopted when required.

1513. Do not you fancy, that although there should not be an Act of Parliament prescribing it, a real power might be given to the Board of Trade to make rules to be suited to particular occasions?—I think that might be done very judiciously.

1514. Do you think that any harm would happen to the public, by way of diminishing responsibility on the part of the company, by the Board of Trade so doing?—I do not think there would, because at present, generally speaking, when a reservoir is being made, there is a provision that there shall be some person appointed to report upon its safety before it is filled; at any rate in Scotland it is so, generally speaking.

1515. By whom is that person appointed?—Generally by the sheriff.

1516. Can you inform the Committee whether that is done by a statute, or by common law?—Generally, by the statute authorising the construction of the reservoir.

1517. By the Private Bill?—Yes; in the Edinburgh Waterworks Act, generally speaking, the reservoirs are obliged to be certified as being sufficient before one can fill them.

1518. Is that a precaution which is usual in Scotch Reservoir Acts?—It is so in the Edinburgh Waterworks Act and some others.

1519. You did not find that that provision at all diminished the responsibility of the Company, did you?—No, I did not think myself less responsible on account of that.

1520. Was there a special clause in the Edinburgh Waterworks Act, giving the sheriff power to inspect and certify?—Yes.

1521. Do you recollect the date of the Act?—The last Act was in 1863. It was only on the request of the parties that the sheriff appointed.

1522. It did not give him power of his own proper force to go in and appoint a man?—Only on the request of the parties.

1523. Have you read the Bill which is now before the Committee?—Yes.

1524. What is your opinion of the Bill as affording protection to the public?—I think that in a case of any emergency giving more summary power to the proprietors of the reservoirs to take land is very good.

1525. Do you think the Bill is an adequate Bill for the subject, large as it is?—Yes.

1526. You do not find any provision for inspection?—No.

1527. Do you think that the Bill ought to contain a provision for inspection?—I think it would be very proper.

1528. Will you be kind enough to state whether, in your opinion, a dyke like Dale Dyke would be sufficiently inspected by the engineer who constructed it, going down twice a year to look at it as it was being built?—I do not know the mode of inspection.

1529. Supposing you were told that the engineer went down to inspect the dyke while it was building, do you think that would be a sufficient opportunity for the engineer to judge of what was going on?—No, I think it is too little, he should see it oftener unless he has very great confidence in his resident engineer.

1530. Is there anything you wish to add?—Regarding the point about the slip, I should like to be understood that I have not seen it, and that I do not say there was not a slip; I thought at the time there was sufficient to account for the accident.

1531. Mr. *Kendall.*] As I understand, you thought that the Sheffield Waterworks were badly constructed; did you judge more from what you saw going on at Agden, and from the specification there?—I judged from the specification of the Dale Dyke Reservoir, and I judged from a reservoir being made in the neighbourhood from a similar specification.

1532. Were the specifications word for word alike?—The specifications were the same in both cases.

1533. Do you think the specification was faulty?—I think the specification was faulty so far; but I think there was a still greater fault in not adhering to the specification; because, where the specification said that the layers must not be more than three feet thick, they were actually making them six or seven feet deep.

1534. What was the nature of the stuff?—What I saw being put on at Agden Dyke was quarry rubbish.

1535. You think the specification was faulty; would a Government Inspector, a perfectly unbiassed person, be doing his duty if he did not object to that specification; and would he not have made that specification much more stringent and strict, than the specification which you saw?—I think he would and ought; but, at the same time, there is great difference of opinion upon that.

1536. Would or not an experienced man, in your opinion, have done his duty if he had not insisted on pits being sunk to ascertain whether or not there was a hidden land-slip?—It ought to have been pitted down to see where it joined the solid.

1537. Mr. *W. E. Forster.*] Do you know of inspection having been made by the sheriff, or by any

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any person answering to the sheriff, in Scotland, except in the Edinburgh case?—I know that it has been done at other places; I have often inspected reservoirs upon application from public bodies; I have inspected several reservoirs this last year; after that accident at Sheffield, I was sent to look at the reservoirs at three or four places.

1538. Have you inspected any reservoirs before they were filled?—No; I do not think I have. I have had many of mine inspected.

1539. Do you know whether a certificate is required of the safety of Scotch reservoirs?—I do not speak of Scotch reservoirs generally, but I speak of the Edinburgh Waterworks.

1540. Were you the engineer of the Edinburgh Waterworks?—Most of them.

1541. Were any steps ever taken by the undertakers of the reservoirs to get permission to fill it?—There was a provision that we should not fill the reservoirs until there was a certificate from the engineer appointed by the sheriff that it was sufficient.

1542. Who was the engineer who gave the certificate?—The last one was Mr. Benjamin Blythe, and some of the others were Messrs. Stevenson.

1543. Are you aware whether there is this difference between Scotland and England, that whereas in England no certificate from engineers is required by the general law before a reservoir is filled, in Scotland it is so required?—I am not aware that, as a rule, it is required in Scotland; but I have known that in many Private Bills it is provided that it shall be required. With regard to the Dundee Reservoirs, of which I was the engineer, there was no such provision; and there was no such provision with regard to the Dunfermline Reservoir.

1544. What inspection did the engineer make in the Edinburgh case?—He looked at all my plans and sections, and looked generally at the work. Of course, he could not judge of it as he could have done if he had seen the thing from the beginning, and he was obliged to take something on trust.

1545. Did he go before the water was turned in?—Yes.

1546. Did he bore or make any examination to test the work?—No; nothing more than just imputing what was visible, and comparing it with the plans and sections; and he inquired of the inspector whether the work had been done in the way described in the specification, and so forth.

1547. You stated that you had made holes to test the reservoir; did he inspect those tests?—No.

1548. Does the Edinburgh Waterworks Act require that there should be any annual inspection to see that the reservoir is kept in repair?—No; in the Edinburgh Act there is no such provision; and after it is once filled there is no other inspection required; again, in the Act of the Paisley Waterworks, which were handed over from the Company to the Corporation, it is provided that there should be inspection once in three years, and that is for the safety of the Company who have an interest in their being well kept up by the Corporation, because if the Corporation allowed them to fall into disrepair they might not have good security for the payment of the dividend of the Company.

1549. Were you the engineer of the Paisley Waterworks?—I am appointed to inspect once in three years,

1550. When was that Act obtained?—The Paisley Act was obtained in 1853.

1551. Is it your duty once in three years to inspect that reservoir?—I just go when I am called upon; I am not appointed by name to do it once in three years; but it is provided that an engineer shall visit it once in three years, and I am the person asked to do it.

1552. I think we gather from your answers that you approve of Government inspection before the filling of a reservoir?—Government inspection or that of any other responsible public body.

1553. By some competent person appointed by itself?—Yes; I think it is perfectly right.

1554. Would you also be in favour of such inspection being repeated annually, or at some stated time, to find out that the reservoir was in repair?—I do not think that is necessary.

1555. You have had no accident in Scotland causing great loss of life in recent times, have you?—There was a bad one at Greenock at one time.

1556. *Chairman.*] How long ago was that accident at Greenock?—About 30 years ago, I think; it was a private reservoir; it was a miller's reservoir, which was not constructed by the Shaws Water Company, but bought by them, and the water had been allowed to overtop the reservoir from want of a sufficient waste weir and to wash down the embankment.

1557. Mr. *W. E. Forster.*] Did you inspect the Holmfirth Reservoir?—Yes, I did; and there could be no doubt of the cause of the accident there.

1558. What do you consider was the cause?—The embankment had sunk and got below the level of the waste weir, so that the flood water had no means of escape, except over the top of the embankment.

1559. Is it not true, in general terms, that that reservoir broke because it was not kept in repair?—It gave way because they neither heightened the embankment so as to make it above the level of the waste weir, nor did they lower the waste weir so as to bring in below the level of the embankment. If they allowed the embankment to get below the level of the water, and there came a great flood which could not escape in any other way, it must go over the top.

1560. Was it not the case that that reservoir had been allowed to get into a different condition from what it was when it was first completed, and that its being allowed to get into that condition was the chief cause of its bursting?—No doubt of it.

1561. Do not you consider that is a case in which the advantage of an annual inspection is shown, inasmuch as the inspector, if he be a competent person, must have seen that the reservoir required repair?—He would, certainly; but that is a very extreme case. I cannot conceive that the proprietors of any other reservoir would allow such a thing to exist. It was so clear that this must happen at some time or other, that I was astonished that it should have been allowed to exist.

1562. Still it was a case in which some hundreds of lives were lost?—It was.

1563. Mr. *Hibbert.*] You say that you are appointed as an engineer to inspect the Paisley reservoirs once in three years?—Yes.

1564. How long have you acted in that capacity?

capacity?—I think that I have inspected them three times.

1565. That is, extending over a period of nine years?—The Act passed in 1854.

1566. Then since the year 1854 you have held the appointment of inspector?—Yes.

1567. And you have inspected them three times?—I think so; three or four.

1568. Do you, from your experience as an inspector extending over that number of years, think that inspection once in three years is sufficient to see that all the necessary reparations are kept up, supposing that anything is required?—I think it is quite sufficient for the important works, or anything on which safety depends; many minor things may go out of repair during that time. I think that once in three years is quite sufficient for the purpose of seeing that the embankment, and all the things on which safety depends, are in good order.

1569. You think that if a Government Inspector were appointed, it would be sufficient if he inspected once in three years?—I think so, unless there was any complaint in the meantime.

1570. *Chairman.*] Have you ever inspected or made any embankment for private reservoirs?—I have made plans of several small reservoirs for the supply of gentlemen's houses.

1571. Supposing a gentleman had a large reservoir on his pleasure-ground, filled from surrounding waters, might not the danger to the adjacent population be very great if that reservoir should burst?—I know a case of the kind where there was considerable damage done by a reservoir of that sort; it was at the late Mr. Ferguson's, of Raith, in Fifeshire; he made a large artificial lake; it was not the lake that burst, but it was a mill-dam or reservoir which was below; there was a large flood out of the lake, and it overtopped the mill-dam, burst it, and did a great deal of mischief.

1572. Then the same class of mischief, although not to the same extent, would result from private reservoirs that result from companies' reservoirs?—Yes, of course, if any private individual made a large artificial reservoir; but those are not very common, and you need not be afraid of anything from a natural lake.

1573. Supposing that down a valley which was full of mills worked by water, dam after dam were to be made, might not great injury arise to the people below those dams, if they burst; and does not the same danger exist in that case as in the case of the reservoir that we have been speaking of?—Certainly, if they were large enough.

1574. Do you know the Stroud Valley Reservoir?—No.

1575. Do you know any valley in which there is such a penning-up of water as to be made dangerous to the public?—In the neighbourhood of Manchester there are large reservoirs.

1576. Mr. *W. E. Forster.*] Is it not very common in Scotland, that in the mountainous country large tracts of land belong to one landlord?—Yes.

1577. Are they not of such extent of area, that it would be possible for one landlord to make a reservoir of considerable extent, without having need to apply to Parliament on account of the interest of other landowners?—There are many such places.

1578. Do you know whether there is any check at all on such a maker of reservoirs, to consider the safety of the public?—I do not think that there is.

1579. Are you aware whether any person resident in Scotland upon a stream which is impounded, has a right to apply to the sheriff for an injunction?—I have no doubt that he has; I do not know that there is any statute to that effect; but no doubt they might make complaint to the sheriff that there was danger, and the sheriff would make an investigation.

1580. Was it not once the case at the North Esk, Edinburghshire, that you, being the inspecting engineer, were requested to sanction an addition to the works, and that you refused to do so?—I was not inspecting engineer; Messrs. Stevenson were the engineers for the North Esk Reservoir, and the proprietors wished to heighten their waste weir without heightening the embankment; Messrs. Stevenson would not sanction it, and I suppose that was the reason they sent to consult me; they wanted me to sanction it, and I would not; because they had got a certificate from the sheriff formerly, and I held, that until they made a new application they had no right to change the state of matters.

Mr. John Frederic Bateman, called in; and Examined.

1581. *Chairman.*] You are a Civil Engineer?—I am.

1582. You have been employed in making large reservoirs for the storage of water?—I should think that I have made many more of the large size than any other individual.

1583. You are engineer for the Glasgow and Manchester Waterworks?—Yes. Until I entered the room, I did not know the character of the examination to be conducted. I have put down the number of reservoirs of large dimensions that I have constructed, varying from reservoirs of 30 or 40 feet in height to 100 feet; and I find I have constructed between 40 and 50 of that size, and many of them are amongst the largest reservoirs that have been constructed.

1584. Where was the one that was 100 feet high?—The Manchester Waterworks. We have three reservoirs in the valley of Longdendale, one above the other; the lowest of which has an embankment of 80 feet, the next of 100 feet, and the next of 90 feet.

1585. What was the area of those reservoirs?—I cannot quite tell you the area. The first is about a mile long; the next is two miles; and the third is a mile and two-thirds.

1586. That is the reservoir?—Yes; the capacity of the lowest is about 80,000,000 or 90,000,000 cubic feet. I think the next is about 250,000,000 cubic feet; and the highest is 200,000,000 cubic feet.

1587. On what class of land is the reservoir that is 100 feet high made?—That is made on very difficult ground indeed. I have had more trouble with those reservoirs than any other reservoirs, with the exception of two, that I have ever constructed; they are in the lower portion of the coal measures; in the measures which come in between the two millstone grits known as the Lower Millstone Grit and the Upper Millstone Grit;

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Grit; and where the country is greatly dislocated by fractures which have taken place from the upheaving of the ground.

1588. Is there any water at all through that disturbed stratification?—There is an abundance of springs. The country is very largely supplied by springs; and that is the great temptation to go into that particular geological formation for the supply of water.

1589. Were any openings near to or situate under the embankment that you made?—Not in any case exactly under the embankment; that is a thing always to be avoided if we can; at least, no important ones.

1590. With regard to the 100 feet high embankment, had you a puddle wall running through the middle of that embankment?—Yes; the bottom of the valley beneath the superficial covering consisted of a pretty nearly horizontal stratum of rock, which was water-tight. On that rested a stratum of hard clay, varying in thickness from about seven feet to 10 feet, hard clay, which could hardly be got except by blasting; and upon that, again, the gravel *detritus* of the river, of about an equal thickness.

1591. Did you go through the clay?—Through the gravel and through the clay, and into the rock.

1592. How many feet did that make, generally speaking?—It would vary from, perhaps, 20 feet feet to 27 feet deep, below the natural surface.

1593. In making that entrenchment, did you get the entrenchment full of water?—We should have had it full of water if we had not pumped it out.

1594. Do you think there was any danger to your embankment from your drawing the water from various parts by making this deep trench?—Not the least. The water-tightness of the reservoir depends on the stratum into which the puddle trench is tied, if you depend on a puddle trench. But there are so many circumstances to consider in the formation of a reservoir, that it is impossible to lay down any dogmatic rule.

1595. I think you inspected the Dale Dyke Reservoir after the accident?—I did.

1596. What is your theory as to the cause of that accident?—I do not believe it is possible for any geologist and engineer combined, who has the requisite knowledge and information, to have any hesitation whatever in coming to a determination upon the causes of that accident; it is as plain to my eye as if I saw it taking place at the present moment. I have had a good deal of experience, rather bitter experience, in landslips, and I consider that I have rather a sharp eye for landslips. The moment I got on the ground I saw at once, as I thought, the probable cause of the accident, and I directed my attention, therefore, to an investigation of what appeared to me to be the probable causes. Having heard the questions which were directed to Mr. Leslie, I have drawn out a hasty sketch of the section of the valley, and of the site upon which the embankment stands. I am, to a certain extent, responsible for the general scheme of the Sheffield Waterworks, of which this formed a part; I assisted Mr. Leather in devising the general scheme as to the district they should go to, and the capacity of the reservoirs which should be formed; with the selection of the site for the reservoir I had nothing to do, and I never saw the reservoir until after the accident. The geological formation is exactly the same as that of the Manchester Waterworks, or as nearly so as possible; it is, perhaps, a little higher, but not much higher, in the geological series. There is a particular seam of coal, with a remarkable floor, known by the name of gannister, in that district, which indicates its precise position in the coal measure formation. Stepping out of the carriage which took me to the ground at the cottage at a bend of the main road, I saw all the ground below me riven and torn; knowing the general character of landslips in that particular formation, I looked up to the hill above, and I found there a bold escarpment, with the breast of the hill below all broken and tumbled in the way peculiar to slipped material; I then pursued my investigation generally with every other condition in view, and I found that all the part between the embankment and the ground underneath the cottage at which I had been standing was actually resting on smooth topped rock, which had been bared along the channel of a small stream up to the foot of the embankment. On the other side of the embankment, above the embankment, and on the right hand side, looking up the valley, I found a surface of rock, bared, with an inclination of one in five or six, as smooth as the top of a table, dipping transversely across the embankment, and it is on that rock, so smooth as I have described, that it actually rested. The original intention was to have taken the embankment in another line than that in which it was finally constructed; but after the contract drawings were made, and the work let, it was discovered that the end of the embankment would rest on a slippery material, and they therefore moved the embankment higher up the valley, for the purpose of avoiding that slippery material. As far as outward appearances would enable them to judge, they succeeded in going far enough up the valley. In cutting the puddle trench, they cut through a thin layer of clay, which appeared immaterial, and which almost anybody would have considered immaterial; but it is now quite evident that, whilst the clay dies out, or nearly so at the centre, and is not found at all at the foot of the inside slope, it actually thickened from the centre to a considerable thickness on the outside; so that there was a wedge of clay there resting on the top of the rock, dipping transversely, on which the embankment was raised, which was not detected until the accident occurred. The clay on the outside, which formed the continuation of that under the embankment, was cut away to some extent down to the rock, for the purpose of making the puddle. It is excellent clay; and it may be seen now in the puddle, in very admirable condition. So things remained. The pipe was carried from a bend to the brook above the embankment to a bend in the brook below the embankment. A trench was cut for it, in which it was embedded. The clay was pounded very hard, and upon that the pipe rested, and it was covered with clay in the same way. I should have doubted whether the pipe would have stood the pressure which was subsequently placed upon it without bending; but it was quite obvious, from an examination of the embankment and the ground, before any examination of the pipe itself was made, that that pipe could not have been the cause of the accident, because the part of the bank under which the pipe lay was not disturbed. It was in exactly the condition in which it had been formed; and all who have had much to do with reservoirs, know that no leakage could have taken place from the pipe without its

its giving timely warning. It would have created a flow of discoloured water, or a settlement of the bank, or something would have indicated that there was something wrong. But the actual state of things was this, that up to the time of the fracture taking place, there was absolutely no leakage whatever from the reservoir. A little ocherous spring issued in the face of the rock, which was an old spring, which I saw issuing in the same way when the reservoir was empty, and therefore could have had no connection with the reservoir. The embankment was therefore quite sufficient to retain the water; and the pipe could not have broken, because there was no leakage to be observed. The valve was closed on the day before the accident, and there was no leakage whatever. All that indicated a change was, that in the afternoon of the day on which the accident occurred, there was a crack which was observed on the lower side of the slope, very near the top, extending longitudinally over the edge of the trench, where it was cut into the solid ground. That is rather an important point, because, to my mind, it proves that the water, which was then in the reservoir, possibly exerting a lateral pressure, combined with the lubrication of the base of the clay which resulted from the excessively wet weather which prevailed in that part of Yorkshire at that time, destroyed the equilibrium of the bank. The bank was standing on this clay wedge on the top of the sloping rock, and its own pressure perhaps, together with that of the water in the embankment or reservoir, and the wet saturating the bottom destroyed the equilibrium, pushing or allowing to slide off the outer part of the bank, and so creating an entire dislocation from the top to the bottom. Now, if you follow what would next happen, it accords exactly with the description given by Mr. Gunson, who was on the spot, and with the evidences of the embankment itself after the accident. Mr. Gunson walked over the top of the embankment along the crack, which was three or four feet below the top of the bank, on the outer slope, examining the crack by means of a lantern until he got to the end, and there (to use his own words) he stretched his back and turned round, and he saw the water going over the top of the bank and reaching up to his feet. At that moment that part of the bank was slipping at the foot, and letting the top down; the moment that settled down, over the water went, and the whole thing was carried away; and that that was so, is proved by the appearances which now exist and may be seen. The outer part slipped away, and the inner part of the bank, with the stone pitching upon it, fell into the cavity; I think that so far there can be scarcely any doubt that this is a correct solution of the whole of the accident; the pipes were covered up at the outer end by the *débris*; when that was cleared off they were put under hydraulic pressure, to a much greater pressure than they had to sustain in action, and they were also examined by a man passing through with lighted candles; and they were not only straight, but perfectly horizontal. I should have supposed previously that they would have bent with the pressure upon them, but, to our astonishment, they were found perfectly horizontal, and there was not a crack or flaw of any kind; the embankment has been abused as being a bad embankment; the material was not so good as it might have been, but it fulfilled all the conditions that were required of it; and, if it had not broken away at the foot, the embankment would have stood, and the reservoir would now have been full of water. The puddle wall was sufficient to retain the water, and did retain the water to within a foot of being full at the time of the accident; the pipes were tight, and the foundation was perfectly tight; and those are, I think, very important points for consideration.

1597. The embankment burst over the clay?—Yes.

1598. Do you think that any previous inspection of that land would have warned you of danger, or put you on your guard as to danger?—Possibly I, having had experience of landslips, might, seeing a landslip, have taken a great deal of pains to avoid it; other gentlemen, who have not had the particular experience which has happened to have fallen to my lot, might and did consider that they had gone quite sufficiently up the valley when they got off all land which gave any indication of having slipped.

1599. That being the case, do you think that there would be any increased security to the public if specifications and plans of the intention of the undertakers were sent to an authorised body in London to send down a competent engineer to make inquiries?—No; not if the position which you put could be effectually carried out; but who is a competent engineer?

1600. In those cases, as in others, are not two heads better than one?—That depends entirely on the heads; I think that, in many cases, one head is better than a dozen. I am in favour of such inspection, if it can be adopted, as will give proper protection to the public, and prevent hazardous constructions.

1601. Taking the ordinary race of men, are not people very often inclined to make hazardous constructions?—Yes, very often; and want of experience, rather than the desire to run risk or hazard, is generally the cause; in my own experience, I considered myself very fortunate in having had no difficulties and no accidents in the first large reservoirs that I made, and I began making reservoirs when I was about 26 years of age, and made some of the largest at that time which had been formed; I was very cock-a-whoop, and I thought there was no difficulty; but, subsequently, every piece of conceit has been taken out of me, and I have become very humble in all the views I take on such subjects.

1602. That being the case, do you believe that no harm would arise, and that some benefit might result from having a competent authority, having no interest but the public interest, to see that those reservoirs were carefully and prudently made?—Yes, I think so.

1603. Do you believe that sort of inspection would tend to diminish the feeling of responsibility on the part of the engineers who were engaged in the work?—I should be afraid of that. The three points to which an engineer's attention ought to be directed are, first, the security of the site on which the reservoir has to be constructed; secondly, the mode of construction; and, thirdly, the manner in which the work is executed.

1604. Are there not established modes of making the inspection determine whether there is danger from land slips or otherwise?—No; you cannot try an embankment as you can try a railway bridge, until you incur the risk of fracture.

1605. I mean before you begin the work?—All you can do, before you begin the work, is to determine, by the closest examination you can make,

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make, whether the ground is likely to be suitable for the construction of the embankment.

1606. Taking the case of the Dale Dyke Embankment, supposing that an imprudent man began to make the embankment without any inspection at all, without sinking pits, and without boring, do not you think that Government inspection would bring that man to a more prudent course?—Yes. I think, for instance, taking Dale Dyke, that it would have been a culpable thing on the part of the engineer to have placed the embankment where it was first projected; not culpable in the sense of doing that which he believed to be wrong, but from want of sufficient information with respect to landslips. Mr. Gunson was really the constructor of that reservoir, and he had constructed three or four large reservoirs at the Sheffield Waterworks, without having had to meet that particular difficulty, and, therefore, his eyes were not quite open to it; but as soon as he detected it, being a man of very good common sense, and a very excellent and honest man, he moved the embankment up to a point at which he though the had escaped from the danger. Now, there, a man, with larger experience of the particular kind which was required to give a knowledge upon such a subject, would have seen at once the wrong position of the first embankment.

1607. Supposing that a man of ability were placed in the position of Government inspector, and that he inspected the reservoirs all over the kingdom, do not you think that large experience would enable a highly intelligent man to be a very useful adjunct to any engineer who should undertake such a work?—I would rather take the experience that is gained by actual construction than the information which is obtained by mere inspection. The information which can be obtained by mere inspection is of a very inferior character to that which is gained by having to encounter the actual difficulties of construction and overcoming them. If you can obtain a gentleman whose experience has been large and varied, of the intelligence you suggest, then I think such inspection would be valuable.

1608. I suppose that such a gentleman would be obtained, if adequately remunerated?—I do not know whether the Government would pay sufficiently, considering the present demand on the profession.

1609. If the Government paid sufficiently, you could get intelligence of that sort?—I think so.

1610. Having got intelligence of that sort, do not you think there would be increased security to the public?—Yes, possibly.

1611. Do not you believe that there is real danger to the public existing, as is proved by sad calamaties, from the want of sufficient care being taken?—The strongest case in favour, not only of inspection of some kind, but of power to compel the restoration of an embankment, is the Bilberry Reservoir at Holmfirth. I heard some questions asked about that, and I have made a sketch of it; I had reported several times on the dangerous character of that embankment. It was in the hands of Commissioners, who were all mill-owners, on the river on which that reservoir was constructed. They quarrelled among themselves and there was no union, and there was no control. The embankment, which never ought to have been made where it was placed, or in such a situation, was so leaky that in that was its safety; and it is perhaps the strongest instance of the little danger, generally speaking, which attends a bad embankment.

1612. Then the worse it is the better it is?—That reservoir never filled to the top of the bank, except on the single occasion when it broke away. It was so leaky through the rock in which the puddle had been sunk, which was not water-tight, that the water escaped below, and the embankment constantly kept settling down, and clearly telling its own tale as to what was going on; it shows that you may trust an embankment to tell its own story, except as in the case of the Bradfield reservoir, where no notice was given; but, in an ordinary case, a reservoir will tell its own tale, and enable you to judge of what is probably going on. That embankment settled down until the top of it was lower than the waste weir of the Reservoir; and so often did it leak, as fast as it partially filled through this open rock beneath, that a sort of feeling of safety was created. However, in February 1862, the rain came down so heavily that the water overtopped the embankment, and then it passed over the puddle-wall into a rubble-wall which was placed on the side of the puddle. It had been thoroughly badly made; the stones had been taken out of the clay-puddle and built up on each side of the puddle-wall, and the stones which rolled down from the general material of the embankment on each side were also piled up, so as to make two rubble-walls from top to bottom of the bank, on each side of the puddle; the bank settled down and bulged out, as soon as the water got over the top, and then the whole fell over. I had to inspect it immediately after the accident; I made sketches on the spot, and I saw all that had taken place, and I have since had to repair that reservoir.

1613. You have said that the site was ill chosen?—It was a difficult site, at all events, to make a water-tight reservoir.

1614. And then you stated the mode of construction was insufficient?—The mode of construction which was adopted was not suited to the circumstances. I have had to make a reservoir on the same spot, and I adopted a different mode of construction.

1615. If a competent person had been there when that site was chosen, and when the embankment was being built, would he not have said, "You are wrong, and you ought not to do this?"—Yes; a competent person would certainly not have adopted the mode of construction that was adopted there.

1616. Supposing that competent person were a Government inspector, would he not at once have suggested to the Government that that dyke should not be created in that way at that spot?—Yes. The circumstances were these: the base of the valley was rock, and each end of the valley was rock, and nothing but rock, open rock; there was no water-tight stratum either beneath or at the end where the embankment was placed, into which they could tie the puddle-wall.

1617. Supposing that a competent engineer had been employed by the Government to inspect the spot, and to consider the specifications and plans which the engineer was about to adopt, and who also saw the mode in which it was being constructed, would there not have been an increased security to the public in that man finding fault with what was being done?—Yes, I think so, in that case.

1618. Mr. *W. E. Forster.*] You have stated that

that you consider that the site was a difficult one?—Yes.

1619. And that the construction was not such as was fitted to the site?—The mode which was adopted was not fitted to the site.

1620. Are you of opinion that, being so made in such a place, it was or was not kept in repair?—It was entirely neglected, grossly neglected.

1621. Do not you believe that a competent engineer, who was required by Government to report annually on that reservoir, must have found out the state of repair in which it was?—Yes, it was notorious.

1622. Am I right in understanding you to state that you had reported on the condition of that reservoir before it burst?—Several times to the Commissioners themselves.

1623. What did they do with those reports?—Nothing.

1624. Will you describe how you came to be asked to report, and by whom?—It is now 16 or 17 years since I first became connected with it; but I had occasion to examine the place, and to report on it for the Commissioners, with reference to one if not two applications, which they made to Parliament for the purpose of arranging their difficulties.

1625. Did your reports never get out before the public?—I do not know whether my reports got before the public in the ordinary way; but I think I gave evidence to that effect before Parliamentary Committees.

1626. Did you give evidence to the effect that the reservoir was in a dangerous state?—To the best of my belief I did. They failed in their Acts; but I do not quite remember the point on which they failed; certainly, if I gave evidence, I gave evidence to that effect.

1627. It has been suggested to this Committee by one engineer, a gentleman of great experience, Mr. Jackson, that a sufficient check upon a reservoir being unsafe would be a periodical publication of a report by a competent engineer giving power to Government to take steps. Would not your experience with regard to Holmfirth Reservoir, lead you to suppose that that would not be sufficient?—For the last 12 years I have given a periodical report on the condition of the Holme reservoirs; they have been under my charge almost ever since the accident; they came to Parliament in the following year to repair the Bilberry Reservoir; it is repaired, and it is a very troublesome reservoir, and it is not quite in a satisfactory condition, and I have had to make periodical reports once in every year.

1628. Referring back to the Bradfield Reservoir, I understand you to say, generally speaking, that the cause of the accident was a land slip?—No doubt of it.

1629. How do you account for a land slip occurring at the precise moment when the reservoir became full the first time?—That may be accounted for by one of two causes, or from those causes combined. It was an unusually wet period, probably the wettest period that had occurred since the embankment was completed, and therefore quite apart from any pressure in the reservoir, it was probably the first severe test which the equilibrium of the embankment had to sustain after it was completed, by the weight resting on this clay, which again rested on a smooth top rock; that might be sufficient by itself; or it may be that the pressure of the water in the reservoir, permeating with some amount of pressure the whole bank against the puddle wall, was too much for the equilibrium of the bank, and pushed it off, and created a crack, which was observed; or it may have been from the two causes combined.

1630. You think that the water was permeating the rock?—Permeating the inner part of the embankment up to the puddle wall.

1031. How did that water get there?—By permeation of the bank. The embankment was not made of entirely water tight material.

1632. Was not that perviousness of the embankment rather increased by want of drainage?—Not at all.

1633. You do not think that want of drainage had anything to do with it at all?—Nothing whatever.

1634. Have you had an opportunity of reading the evidence which has been given before the Committee?—I have not read the evidence, nor have I heard anything about it.

1635. I daresay you are aware that we have had different causes of this accident given to us by eminent engineers?—I am not at all aware of it; but you will have to judge for yourselves which is the most likely cause.

1636. We have had nine engineers examined, and we have had many different causes given to this accident; and in almost every case, the witness having the highest possible reputation, has spoken with the greatest possible confidence as to the cause. Do not you think that this great difference with regard to the cause of so serious an accident, tends to show that practical scientific knowledge with regard to the construction of reservoirs, from which so much loss of life may occur, is not in that condition in which there can be any great confidence?—I am afraid it must be so, and I am afraid that goes very much against the appointment of an inspector. If you have nine different people giving different opinions, it is possible that an inspector may take an entirely erroneous view, and then the responsibility will rest upon him, and perhaps upon the Government, instead of the parties charged with the execution of the work.

1637. Does it not also point to this; that the danger to loss of life being so great, and the difference of opinion of competent persons being also so great, it is necessary for the protection of the public to take every precaution which is devised by almost every person who is competent, however much they differ in opinion?—I quite admit that.

1638. Have you seen the rules that have been suggested by Mr. Rawlinson as desirable to be enforced in the making of reservoirs?—No; I have not.

1639. Do not you think that it would be possible to lay down certain rules, which under all circumstances must be kept?—They must be of a very general character.

1640. For instance, such a rule as this: that no pipes shall be buried under a reservoir in such a manner as that access will not be easy to them for repair?—That is not necessary. Very many cases may occur in which the pipes may be laid with perfect security and safety, without its being necessary to follow such a rule.

1641. Now we come to the extraordinary difference that we had in engineering testimony before us; we have had one engineer of great

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experience telling us that iron pipes would last probably for ever, and we have had another engineer stating that probably the maximum time they would last would be 50 years; what is your opinion with regard to that?—I do not think they would last for ever, but possibly they would last so long as to make the surrounding ground, if they were to decay, almost a pipe itself, by the corrosion of the pipe combining with the surrounding material.

1642. We come here to just a case illustrating a question that I had previously put to you; there may be difference of opinion as to whether these pipes will last for a great length of time or not, and therefore there may be difference of opinion, and each opinion may have good grounds, as to whether it is necessary that access should be possible to these pipes, in order to find out whether they are out of repair; but do not you consider that, taking into account the possible loss of life, and also this difference of opinion, it would be quite fair for the Government to say that they would err on the safe side, and determine that such a rule should be adhered to?—I think it would be an exceedingly inconvenient rule without necessity if it were adopted. I am constructing eight large reservoirs at the present time, and in two of them I am putting pipes not through the embankment but beneath the embankment; in the six I am putting them in tunnels driven through the ground on each side, which, in the first instance, serve as means of escape for the water, and which are afterwards used for the discharge of the water by the insertion of pipes.

1643. In the two cases where you have pipes, is access to them possible?—No; but I never put a pipe under the embankment that was not large enough to admit a man.

1644. Then access is possible?—From the inside, but not from the outside. I never put a pipe under a large embankment which I could not get into.

1645. I will read a rule which has been suggested by Mr. Rawlinson: "Cast iron pipes, culverts of timber, or other material liable to decay, shall not be used for outlet discharge, or for overflow works, if required to be buried under or within any reservoir embankment, in such a manner as to preclude repairs, and endanger the structure by decay. Valves and sluices should be placed within the line of puddle wall, and not on any part of the outer slope of the bank;" do you think that rule should be carried out?—The first part of the rule I cannot object to; the second part, that they should be placed in the puddle wall is wholly unnecessary; it may be the worst possible place to put them, and there may be a better place for them.

1646. Do you think any rule could be laid down as to the height to which the water should be allowed to come within the embankment?—No; that depends on the extent of area which may be agitated by the wind. In a small embankment you may have the water almost to the top, without danger.

1647. Do you think it possible for a competent engineer to construct a sliding scale, which if it erred at all, would err on the side of safety?—Yes. I vary the height of my banks above the waste weir from four feet to six feet generally, but then in large embankments, besides the bank being five or six feet above the top of the water, I generally curve the parapet wall, which gives an actual height of eight or nine feet; but that has nothing to do with the safety or construction of the bank, except so far as the wave may be driven over by the wind.

1648. When you make the exception, is not that a very possible cause of accident?—I never knew an embankment give way on that account, except two, I think, in Scotland.

1649. You do not think that had any effect in the Dale Dyke accident?—Certainly not. If you make a sea embankment you make it from five feet to six feet, or nine feet, according to the amount of swell you may get against it.

1650. In one of your late answers you stated, that you never knew this lead to an accident, except in two cases, do not you think that, considering the extent to which life is imperilled by these reservoirs, that any well ascertained instance of an accident having followed from a certain cause, makes it desirable, in future, to guard against that cause being in operation?—There is no harm in requiring that the top level of the embankment shall be so many feet above the top level of the water.

1651. Do you think it impossible for a competent engineer to construct some sliding scale of the thickness of the puddle-wall, in proportion to the weight of water that was brought to bear upon it?—That depends very much on the quality of the puddle, and the circumstances of the ground. There are many cases in which embankments may be made without any puddle-wall at all. I should not wonder at hearing that you have had evidence from people who had experience in the great alluvial tracts of India, and the south of Europe, where it is not necessary to make a puddle-wall at all; it is made out of material which is itself puddle, and done by basket-work, and by people padding it all over, and that would become a puddle-wall of itself.

1652. I will read you two rules which have been suggested by Mr. Rawlinson, and I should like to have your opinion upon them. First, "The finished top bank width of any reservoir shall not be less than the following dimensions, namely: an embankment 25 feet deep, not less than 6 feet wide; an embankment 50 feet deep, not less than 12 feet wide; an embankment 75 feet deep, not less than 18 feet wide. Intermediate or lesser or greater depths of embankment may have proportionately arranged widths." Next, "The finished top bank level of any reservoir shall not be at less than the following elevation above the head of the bye-wash, or top water line of a full reservoir, namely: an embankment 25 feet deep, not less than 4 feet; an embankment 50 feet deep, not less than 5 feet; an embankment 75 feet deep, not less than 6 feet. Intermediate or lesser or greater depths of embankment may have proportionately arranged relative top bank and bye-wash levels"?—I have not had an opportunity of considering those rules.

1653. *Chairman.*] I was about to suggest that perhaps you will send your opinion in writing?—Yes. A few general rules may be formed with safety; but the most dangerous part of dogmatic teaching is that a rule may be laid down which is utterly inapplicable to the case; and then you have a rule which, like the laws of the Medes and Persians, is not to be varied from, and it is inapplicable. I do not allude to top widths, but to the actual construction and the material, on which the safety of the embankment of the reservoir depends.

1654. Mr.

1654. Mr. *W. E. Forster.*] I am asking you with regard to rules with this view, not that we suppose it is possible to devise rules which shall guard against all accidents, but we want your opinion whether it is not possible to devise rules which might tend to prevent accidents, and from adherence to which no danger could follow, although it is possible that some unnecessary expense might follow; and with that general view, we should be very glad of your opinion in writing, with regard to these suggestions of Mr. Rawlinson. You will find that, up to No. 6 inclusive, they are rules with regard to the plans which are to be submitted to Parliament, or to the Home Office, before the Act is obtained; and from No. 6 to No. 12 inclusive, they regard the construction to the reservoirs; and No. 13 and No. 14 regard the maintenance of the reservoir?—Yes; I will send my opinion in writing.

1655. Have you been employed in making railways?—I have never made any important railway.

1656. Then you cannot give the Committee any information as to the working of the present Government arrangement, by which a railway has to be inspected before it is opened?—Yes; I know all about that.

1657. Knowing that, do you not think that, whatever reason there may be authorising the Government to inspect railways before they are opened, it will, so far as danger to life is concerned, apply in a still greater extent to reservoirs?—Yes.

1658. Is there anything which you think, in regard to reservoirs, makes inspection more difficult than with regard to railways?—Yes. An embankment for a railway need not be watertight. It will carry rails and a weight over it, which can be tested without danger to life, and that is all you want in an embankment of a railway. On a bridge you may put a weight, and see whether it will bear the load it will have to carry in practice, without danger to life. You cannot try a reservoir after it is finished, without filling it with water, and there the danger occurs.

1659. Is it your opinion that it would be much easier for an inspector, in case of a railway, to ascertain whether it was safe, than in the case of a reservoir?—It is perfectly easy for an inspector, in almost all conditions of a railway, to ascertain whether there is danger or not. It would be absolutely impossible for an inspector to ascertain, in many cases, whether there was danger in an embankment of a reservoir, except by incurring danger to life and property.

1660. A Government inspector, if he was competent, would have prevented the Holmfirth accident, would he not?—Certainly; that is to say if there had been power to construct works, or to cut down the reservoir.

1661. If there had been power given to any authority upon a report from the inspector that there was possible danger to remove the danger by carefully letting off the water, that accident might have been avoided?—Certainly.

1662. You have made two or three large reservoirs in Scotland, have you not?—Yes, I have made several large reservoirs in Scotland. I have made two large reservoirs for the Forth and Clyde Canal, and I made the Glasgow Waterworks. I have made two large reservoirs there in connection with the Glasgow Waterworks.

1663. Do you know whether the law is at all different in Scotland as to Government inspection, or as to the necessity of Government sanction of the safety of a reservoir before it is opened, from what it is in England?—There is no Government inspection there.

1664. In England is it not the law, generally speaking, that two justices certify that a reservoir is competent to hold the water?—No; there are two or three exceptional cases where that power is given.

1665. Is not that provided by the General Waterworks Act?—No. In cases of danger, the parties who are afraid of danger may apply to justices; but previously to a reservoir being used no inspection is required, as a general rule, either in England or in Scotland.

1666. Is it your opinion that the power which persons who think themselves endangered by a reservoir at present have of compelling the reservoir to be examined, ought to be increased?—I cannot answer the question; I have not considered it.

1667. Do you know what power they have at present?—I know they have a power, but I am not at this moment so perfectly aware of its extent as to be enabled to answer your question as I ought to do.

1668. Do you consider that, after all, by far the greatest guard against accidents is to keep the responsibility upon the undertakers for the payment of the damage caused by the accident?—Certainly.

1669. And any inspection which should relieve them of that responsibility, you consider would do more harm than good?—I think so. I think that a certain number of general rules might be prescribed which would be advantageous to the public; but I think anything beyond which would have a tendency to relieve the parties really responsible would be dangerous.

1670. Do not you think there might be power given to some authority in the country to prevent a bad site being taken for a reservoir?—Yes; but that ought to be matter of investigation before a Committee of the House, probably.

1671. You will find in the first rule suggested by Mr. Rawlinson, that his object appears to be to guard against that by compelling the undertakers to send to the Home Office, in order that they might put before the Committee the opinion of some competent engineer as to the plans. We should be glad to have your opinion when you send in your written suggestions, whether you would not apply that to the choice of the site?—I think the choice of site is one of the most important things of the whole; but you may go to an entirely unfit site to an ordinary observer, and yet that site may be treated in such a way as to make a perfectly secure reservoir.

1672. Do not you think that it would be an advantage that a competent engineer should be sent down by Government to inspect the site, and that his report on that site should be sent to the Home Office, and that it should be the business of the Home Office to bring that report before the Committee which has to consider the Bill, so that the Committee should not be left merely to the opponents of the Bill who may have had terms made with them by the promoters, but that the Government, as protecting the lives of the people, should be obliged to appear before the Committee and give their opinion?—I think it is very desirable that some course should be adopted by which the site of every reservoir should be properly inquired into.

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1673. Are there not some cases in which very large reservoirs are made, without the necessity of going to Parliament at all?—Very few indeed; I should think scarcely any.

1674. Would that not be the case in Scotland; for instance, in mountainous districts, where enormous tracts of land are owned by one landlord?—That could scarcely happen in a much peopled district, because no man by the law of the land has any right to impound water.

1675. He would have to go to Parliament; even if it were on his own land, if by impounding the water he kept it back from his neighbour below?—Yes.

1676. *Chairman.*] You have given an answer which has puzzled me throughout the inquiry; you have said that you could ascertain all the possible injury arising to a viaduct by inspection, but that you could not do that in a case of a dyke that kept in water. You say that in the case of the Dale Dyke, the accident arose from a sudden cause, namely, a sudden slip, and that it could not have been foreseen?—It might have been foreseen to some extent, but it could not have been ascertained that it was dangerous, except by experiment.

1677. Supposing you threw a viaduct across a valley, and that the piers on which the viaduct rested were placed on precisely similar ground to that on which the Dale Dyke Embankment was placed, might there not be the same sudden cause, arising from great rains loosening the foundation and causing a sudden slip?—That is possible.

1678. Would not that have been just as difficult to have found out by inspection, as in the case of Dale Dyke?—Very likely, if it is a mere question of foundation; but not only are the consequences so entirely different, but the premonitory symptoms which would exist almost certainly in the one case and not in the other, would lead to some repair; for instance, it is constantly the case that railway viaducts show indications of weakness in the abutments or foundation, and there is some sinking of the piers or some pushing out of the ground, which enables precautions to be taken. It seldom happens, it may possibly happen, but it is a very singular case, that such a sudden slip which would carry away the foundations of a bridge would take place, as that which occurred to the Dale Dyke bank.

1679. In the case of the Dale Dyke Embankment there were great rains, the reservoir filled, suddenly the land slipped, and that caused the fall of the wall; supposing a viaduct to be built on exactly similar site, that great rains occur, and that there suddenly comes a railway train over the bridge, would not that be a case (in which great loss of life might occur) very nearly analogous to the Dale Dyke?—Very similar; and that may occur.

1680. Therefore, if inspection is employed in the case of a railway, and is subject to that inadequacy, if I may use the phrase, the same difficulty occurs in the case of a reservoir; and as we have adopted inspection in the one case, may we not wisely adopt it in the other?—I do not at all object to inspection if properly carried out; but you must remember that is only one single condition of a great number in a railway viaduct which may escape proper detection. They may try the strength of a structure as to its power to bear weight over it, as to whether the foundations sink or carry the weight, so as to certify everything stable and secure, except the single point to which you have directed my attention; but in a reservoir, it is that one particular point which would create all the mischief, possibly. I scarcely know any instances of embankments being so badly constructed that they have not been watertight; but almost all the difficulties that we have to contend with in the construction of reservoir embankments, arise from the foundation or from the site of the reservoir itself; those are points which you cannot ascertain by experiment, until you have created the danger which you are anxious to avoid.

1681. But you think that the preliminary inquiry before the Committee is a matter of very great importance?—I think that a competent and sufficient preliminary inquiry is a matter of great importance.

1682. Then the preliminary inquiry before a Committee cannot be done but through the means of persons who really have seen the spot?—No, it ought not.

1683. And therefore somebody must be sent to look at the spot?—If it is at all a contested Bill there is generally a great amount of opposition, and every weak point is contested, which brings out pretty nearly the truth; but in the case of its not being a contested Bill a reservoir may be made which ought not to be made.

1684. In the case of Dale Dyke there was great opposition, but it did not bring out the weak point, and that which brought out the weak point was the flood?—Yes.

1685. Mr. *W. E. Forster.*] Do not you think it would be desirable to make it the duty of the Home Office, the Board of Trade, or some office of the Government, to take care that the Committee were judges as to the safety of the reservoir, and not left merely to decide between the opponents and the promoters?—I am not sure whether that would really carry out the object you have in view.

1686. Do not you think it would do good, so far as it went?—I think if there is to be a competent examination it must be a very thorough one, and that merely being required to report that the gradients are so much, or that there is no engineering difficulty, would hardly carry out your object; it must go to a thorough investigation, first of the site, and then of the mode of construction. But then comes the difficulty, that you may be deceived as to the site, and you may expect no difficulty where you subsequently find a great deal; and even the mode of construction which has been approved may be inapplicable to the circumstances which you have discovered.

1687. *Chairman.*] I think I can put Mr. Forster's view by an analogy. Great advantage is derived from having a public prosecutor; that is to say, that the Government has a duty to perform in watching the safety of the public, by the prevention of crime. Mr. Forster has put this case; he asked you whether you do not think that we ought not to rely wholly on private competition, but that we might impart the element of Government inspection and Government protection for the safety of the public?—I should have no objection to it. I should have to meet such a man more frequently, perhaps, than anybody else, but I should have no objection if the inspection was competent and sufficient.

1688. Mr. *Kendall.*] You have admitted that, from your experience, having done more in the way

way of engineering of this kind than most men, you should most likely have taken more steps to ascertain about these landslips than was done?—I think I should have done it, because I have more particular experience, but I think that 19 engineers out of 20 would not have done more than was done.

1689. You tell us that the line of the embankment was changed in consequence of their knowing and seeing that there had been a landslip, to avoid that landslip?—Yes.

1690. After that change, when they dug out the foundation for the cutting, and when they came to the tail end of a mass of clay, which clay they found to lie on the same polished surface as must necessarily make it dangerous, ought not the engineer at once to have his suspicions aroused that there was great danger?—Until cutting the trench, the polished surface of the stone would scarcely be seen.

1691. But it went through the clay?—I believe a few inches in one small place; some say they had no clay, and some say they believe there was a little clay, and the impression on my mind, by what I gathered was, that there was a small quantity of clay which they did not consider of importance.

1692. Would not an experienced man like an Inspector would be after a time, who was here and there and everywhere, have had his suspicions at once aroused by that fact?—He would not probably have been on the spot; you must have a competent inspector constantly on the spot from the beginning to the completion of the work, if he is to watch a case of that sort.

1693. Would he not have a report made to him?—A man might not report it; a man might be executing the work who was not up to that particular difficulty and danger.

1694. Would you not have been very suspicious about it, knowing there was clay there?—Taking all the circumstances together, with the amount of peculiar knowledge which perhaps I now have, I might have been; at the same time, I could not blame 19 men out of 20 for not doing it. There is one point upon which I desire to add a few words: I heard Mr. Leslie speaking of tipping in layers. It seems rather a favourite view with many people that an embankment ought to be made in layers. For the purpose of giving my experience, and not of contradicting, I beg to say that depends entirely on the material of which the embankment is to be constructed. If it is clay, or slippy material, or mixed material, you ought to make the embankment in layers; but if it is rock, or gravel, or sand, tipping in layers is no advantage. The way in which I generally make my embankments is this: supposing that it is an open rock foundation which I have to go through to get to the water-tight medium below, I make a good large puddle trench, if it requires a puddle trench, and wherever I pass through a material which is open, I know from experience that the water penetrating that is apt to soften the outside and carry it away, and weaken the puddle; and therefore I build up through that open ground a water-tight wall, so that the water never can come in contact with the clay in such a manner as to carry it away. Then the core or centre of the bank I form either of clay or the next best material, and laid very carefully in their layers, and the outer part of the bank on each side I form of stone or gravel, or other dry material, because in that way I secure my core from slipping, and secure the toe from slipping, and get a perfect form of bank.

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1695. Mr. *W. E. Forster.*] I suppose that you consider that any inspector who is appointed must be entirely confined to Government inspection, and should not be allowed to execute works of his own?—Certainly.

1696. I think I understood from your previous answers, that it would be useless to expect any engineer of sufficient competence to undertake such duties who did not obtain a very considerable salary?—That follows from this: that I do not think a man would be competent who had not great previous experience; and if he had great previous experience the probability is, that his professional position would be such that he would require a high salary.

1697. *Chairman.*] Is not that observation exactly applicable to the barrister and the judge?—Precisely.

Mr. JAMES LESLIE, called in; and further Examined.

1698. Mr. *W. E. Forster.*] SINCE your previous examination, have you had an opportunity of referring to the Edinburgh Waterworks Act of 1856?—Yes.

1699. Are there clauses in that Act which require that certain engineers should declare that the reservoir is constructed in a safe manner?—Yes; in the Act of 1856, and also in the Act of 1863. In the Act of 1856, Clause 55 provides: "The company shall construct and maintain "a gauge, cistern, or other apparatus, at a point "on the aqueduct to the west of the Listonshiels "Reservoir, capable of measuring and passing a "quantity of water not exceeding 250 cubic feet "per minute, less the ascertained yield of the "Listonshiels springs, after deducting from that "yield 20 imperial gallons per minute, which the "company is bound to send down to Cowburn "from these springs; which gauge, cistern, or "other apparatus, shall be constructed at the "sight and to the satisfaction of any one of Alexander Adie, civil engineer in Linlithgow, or "David Stevenson or Thomas Stevenson, civil "engineers in Edinburgh, or an engineer to be "named by the sheriff, at the option of the committee of owners and occupiers of mills and "manufactories on the water of Leith, to be "appointed as hereinafter provided, and shall be "maintained in all time coming by the Company "in good order and repair, and be open to the "inspection of any of the said Committee and "their engineers and servants: Provided that no "water other than spring water shall be allowed "by the Company to flow or drain into their "conduits or pipes; and the better to secure "this from taking place, the pipes and conduits "shall not be laid in the beds of the streams, "except where it shall be necessary to cross the "same; and the whole pipes shall be made water-"tight, except where necessary to take in spring "water, in which case proper openings shall be "made for admission thereof." Clause 59: "When the said Harperrig Reservoir is reported by the Company to be completed, the "engineer

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"engineer or engineers appointed as aforesaid "in reference to the Listonshiels Reservoir, shall "visit and inspect the said Harperrig Reservoir, "and shall declare by writing, under their hands, "that such reservoir is constructed in a convenient, safe, and substantial manner, and of sufficient dimensions, capacity, and construction to "contain 85,000,000 of cubic feet as aforesaid." Clause 61. "It shall be lawful for any of the "owners or any two occupiers of lands, mills, or "works on the water of Leith to apply to the "Court of Session or the sheriff, alleging that "the said Harperig Reservoir, or the embankment, sluices, or other works connected therewith, are or have become insufficient or want "repair, or that it has diminished in capacity to "such an extent as not to contain 85,000,000 of "cubic feet of water, whereupon the said Court "of Session or sheriff shall cause inquiry to be "made into the truth of such allegations by "skilful persons, and thereupon make such "orders for the repair thereof, or otherwise, as "the case may require, so as the said reservoir, "embankments, sluices, and other works, may be "always kept in a sufficient state of repair; and "the Company shall have no control over or right "in the water, to be collected in the said reservoir, nor shall be further concerned with the "supply of water from the said reservoir than "in keeping the same in good order and repair, "and of the capacity aforesaid." In the Act of 1863, Clause 22 provides, "When the said reservoir is reported by the Company to be completed, any one of the engineers before named, "whom failing an engineer, to be appointed by "the sheriff, shall visit and inspect the same, "and shall certify by writing under his hand, "that the said reservoir is constructed in a convenient, safe, and substantial manner, and of "sufficient dimensions, capacity and construction to contain 25,000,000 of cubic feet of water "as aforesaid."

1700. Is there not, in the Paisley Waterworks Act, 1854, a clause by which the sheriff has power to ascertain whether a reservoir is in safe condition or not?—Yes; Clause 88:—"The "Commissioners shall maintain the undertaking "in complete and substantial repair, and shall, "once in every three years at least, have the same "inspected and reported on by an engineer to be "appointed by them; and the report of such "engineer shall be published by the Commissioners in two newspapers usually circulating "in Paisley; and the Commissioners shall, also, "once in every year, if required by the Company, "if and while the said dividend shall remain "unredeemed, have the reservoirs, conduits, "machinery, works and buildings of the Company "to be transferred to them as aforesaid, including "any additions thereto, inspected and reported "on by a neutral engineer to be mutually agreed "upon, or failing such agreement, to be appointed "by the Sheriff of Renfrewshire at Paisley, on "the application of the Company, and the whole "expense incurred in relation to the appointment "of such neutral engineer, and the inspection and "report by him, shall be defrayed by the Commissioners; and whatever such engineers respectively shall report to be necessary to be "done to maintain the undertaking, or the said "reservoirs, conduits, machinery, works and "buildings in such repair, the Commissioners "shall do within such time as such engineers "respectively may direct." Clause 89:—"In order "to provide against accidents to life or property by "the bursting of any reservoir made or to be made "under the provisions of the recited Act or this "Act, whenever it shall be represented to the "sheriff-substitute of the county of Renfrew at "Paisley, by the owners or occupiers of any "dwelling-place, mill, factory or other works "situate below such reservoir as aforesaid, and "so as to be in danger of being destroyed or injured by the water of such reservoir, in case it "should escape therefrom; that such reservoir is "in a dangerous state, such sheriff substitute "shall forthwith make inquiry into the truth of "such representation, and if he shall be satisfied "that such reservoir is in a dangerous state, he "shall order and require the Commissioners, "within a time to be specified, to put such reservoir into a proper state of repair, or construct "such works as may be necessary to remove the "danger; and in case the Commissioners shall "not within the time so limited, and to the satisfaction of such sheriff substitute, have repaired "the said reservoir, or constructed the said "works, or in case upon receiving such representations as aforesaid, such sheriff-substitute "shall consider the danger to be so imminent as not "to admit of delay, he may, if he shall think fit, "order and direct the officer in charge of such "reservoir, or any other person or persons whom "he may think proper, to enter upon the premises of the Commissioners, and to open the "sluices of such reservoir, or otherwise to let off "so much of the water from such reservoir, to "such a level as may be necessary to remove "the danger, and to keep the water in such "reservoir at the reduced level until the said "reservoir shall have been repaired, or such "works as aforesaid shall have been constructed, "to the satisfaction of such sheriff-substitute, signified by him in a writing, superseding such order, "or until such order shall be superseded upon "appeal as hereinafter mentioned; and such "order may be in the form or to the purport and "effect following (that is to say)—'To A. B., I, "'undersigned, Sheriff Substitute of the County "'of Renfrew, at Paisley, do hereby order and "'direct you, and such person or persons as you "'may require to aid and assist you herein, "'forthwith to do all such Acts as may be necessary to lower the water in a certain reservoir, known as the ( ) reservoir, "'by the space of ( ) feet, or thereabouts, and to keep the same at that level "'until you shall be further instructed by me "'or by the sheriff of the said county; and you "'shall do as little injury as possible to the "'property of the Commissioners, under the "'Paisley Waterworks Act, 1854; and in "'acting in obedience to the premises, this shall "'be your sufficient warrant. Given under my "'hand, this day of . (Signed) "'C. D.' And no person acting under or in "pursuance of such order shall be deemed a "trespasser; and any person who shall obstruct "or prevent such person in the discharge of such "orders, or shall wilfully do any act in contravention of such orders, shall, for every such "offence, be liable to a penalty not exceeding "50 *l.*; provided always, that, except when the "urgency of the case will not admit of the delay, "such sheriff substitute, before making any "order to repair any such reservoir, or to construct any works as aforesaid, or to lower the "water in any such reservoir, shall cause notice

"to

" to be given to the Clerk of the Commissioners, " and shall hear and consider any evidence that " may be tendered on behalf of the Commis- " sioners against the making of such order: " Provided also, that if the Commissioners shall " consider themselves aggrieved by any such " order, given or pronounced by such sheriff " substitute, they may appeal against the same " to the sheriff of the said county, who shall " hear and determine such appeal, and may either " confirm or supersede the order of such sheriff " substitute, as he may think proper; but, until " such order shall be superseded, it shall con- " tinue in full force; and the order or judgment " of such sheriff shall be final, and not subject to " review on any ground whatever; and all the costs, " charges, and expenses of applying for, obtaining, " and enforcing such order shall be borne by the " Commissioners, unless the sheriff-substitute " making the order shall direct such costs, " charges, and expenses, or a proportionate part " of them, to be borne by the parties applying " for such order, which he is hereby authorised " to do; and the costs of any such appeal as " aforesaid shall be in the discretion of the said " sheriff: Provided further, that the Commis- " sioners shall not be liable to pay any person " any damages, pension, costs, charges, or ex- " penses for or in respect of, or be answerable or " accountable to any person for any diminution " or cessation of the supply of water, or any " other breach, or unless performance of their or " any of their duties, liabilities, or obligations " under this Act, which may be occasioned in or " by or result from the execution of any such " order as aforesaid, anything in this Act to the " contrary notwithstanding."

Mr. *J. Leslie*, 16 June 1865.

Martis, 20° *die Junii*, 1865.

MEMBERS PRESENT:

Mr. Beecroft.	Mr. Hibbert.
Mr. William Edward Forster.	Mr. Kendall.
Mr. Milner Gibson.	Sir John Ogilvy.
Lord Richard Grosvenor.	Mr. Roebuck.

JOHN ARTHUR ROEBUCK, Esq., IN THE CHAIR.

The Right Hon. THOMAS MILNER GIBSON (a Member of the Committee); Examined.

Right. Hon. *T.M.Gibson*, M.P.
20 June 1865.

1701. Mr. *W. E. Forster.*] YOU are President of the Board of Trade at present, are you not?—Yes.

1702. In the course of the evidence before this Committee, suggestions have been made as to the propriety of appointing Government inspectors somewhat in the same manner as the inspectors upon railways are at present appointed; would you, as President of the Board of Trade, be good enough to state how that inspection is worked now?—There is the inspection which takes place previous to the opening of a railway.

1703. What is done before the opening of the railway?—Notice is given of the intention to open the railway, and an inspector is sent by us to examine the state of the works, the permanent way, and so forth; and if he reports that in his opinion it cannot be opened without danger to the public, either from the incompleteness of the works, or of the permanent way, or from the insufficiency of the establishment, it is competent to us to postpone for a month the opening of the line. We send the report of the inspector to the railway company, in order that they may see what the grounds are upon which the inspector has reported that there would be danger to the public if the line were opened. The inspector does not simply confine himself to saying, "In my opinion there would be danger to the public, if the line were opened;" but he states the grounds upon which his opinion is formed.

1704. Then, supposing that the railway company do not take steps to remove this danger, have you any power to postpone the opening beyond the month?—Yes; we could postpone it again.

1705. Could you postpone it indefinitely until you were satisfied?—Yes, from time to time.

1706. Supposing that you take no action whatever, does the company open the railway without your being required to give consent?—We are not bound to postpose the opening, even if the inspector has reported that there would be danger to the public if it were opened.

1707. It rests with your discretion, does it not?—We are to consider whether we think that the danger is sufficient to justify us in postponing the opening of the line.

1708. So much with regard to the inspection before the opening of the line; do you take upon yourselves any inspection of the railways which are in operation?—We have it in our power to send an inspector, whenever we may think fit, to examine the state of the works, and to report to us, for our information, with a view to the public safety. Those are the words used in the Act with reference to our power to call for returns of accidents.

1709. Supposing you had information conveyed to you, which you thought was worth attending to, that a railway was in an unsafe condition, that the permanent way was so damaged that it was not safe for travelling to be carried on upon it, would you consider it to be the duty of your Department to instruct an inspector to report upon it?—If a representation is made to us that the works are in an unsafe state, then we should send an inspector, if we thought the case sufficiently important, to examine into the truth of those representations, and if we found that they were correct, then we should communicate with the railway company, and put it to them whether it would not be desirable that such improvements, or changes, should be made as would render the works safe.

1710. Do you ever find that this inspection, which you make before a railway is opened, and also during its operation, is ever pleaded by the company as a relief to them from responsibility for damages arising from accidents?—I have never heard of its being pleaded. I do not think that our inspection previously to the opening of a line has any effect whatever in diminishing the pecuniary responsibility of railway companies when accidents take place.

1711. There have been cases, have there not, in which you withheld your permission for lines being opened?—Yes; cases have frequently arisen when the inspectors have made an adverse report, and the company have made alterations or have done something which has met the difficulty when the opening of the line has not been postponed. I do not think that we have ever had occasion to postpone, for any very lengthened period, the opening of a line because the objections have generally been met.

1712. Do you mean that the company has done what has satisfied you as being sufficient to remove the danger?—Generally that is so. I would not say that they have always done that, because we have sometimes thought, when the report has been carefully considered, that the amount of danger alleged to exist was not sufficient to justify so strong a step as preventing the opening of the line; but the company have always felt that they opened it on their own responsibility. Very often there are doubtful

doubtful questions and differences of opinion between engineers, and the amount of danger has not been, in our opinion, sufficient to justify our postponing the opening of the line; but the company, of course, is quite aware of all that has passed, and opens the line upon its own responsibility if the changes suggested are not made.

1713. But you consider it your duty, do you not, either to satisfy yourselves that your inspector's recommendation is not well founded, or else to see that the company have removed the danger?—Speaking generally, that is so. It is a question of degree as to the amount of danger. Undoubtedly, if we saw that there was really great danger to the public, if the line were allowed to be opened in the condition in which the inspector found it, we should feel it our duty to postpone the opening of the line until that danger were removed; but it is a question of the amount of danger to the public. In the case of the Metropolitan Railway, for instance, the danger which was pointed out by the inspector, previous to the opening of that line, was rather a danger arising from passengers being able to imperil their own lives, by reason of sufficient precaution not being taken by the company in the construction of their carriages, comparing the breadth of the carriages with the width of the tunnels and permanent structures. It was alleged that the carriages were so broad in comparison with the tunnels which they had to pass through, that any person incautiously putting his head out of the window might be killed; and it was urged that the line ought not to be allowed to be opened until the company had provided themselves with narrower carriages, or had made such changes as were requisite to meet the evil. However, we did not think that it was right to postpone the opening of the line upon such a ground as that, and the danger was met in another way, by putting bars across the windows.

1714. In that case, although the railway company did not meet the danger in the way suggested by the inspector, viz., by making the carriages smaller, they did meet it by putting bars outside the carriages?—Just so. Then it was urged that a person might be prevented from making his escape from the window, in case the carriage was overturned on the side of the open door; and that was met by its being agreed that the bar should be made so slight, and so constructed that a person could easily wrench it off in case of necessity.

1715. My object in asking these questions is not to get the exact particulars of your suggestion, but simply to ascertain whether you, as President of the Board of Trade, consider that the power which the Government has of satisfying themselves that there is no danger to life before the opening of the railway, and while it is in operation, which can be guarded against, works well?—I think it does; it prevents anything very bad from taking place, and at any rate it is some security that the lines are not opened precipitately, before the works are really ready for the public traffic, and that the ballasting and all those things are in a state to admit of the traffic being carried on with safety.

1716. In reference to the steps which the Board of Trade take, of having a report furnished to a Private Bill Committee with regard to any railway, what is it that the Board of Trade has to do in that matter?—We make two reports; one is a general report relating to the Bills of the Session, and there is a special report upon each Bill. We have been put in possession of the plans, and our duty with regard to the railways is merely to call the attention of the House or of its Committee, when the Bill is referred to it, to anything that we may think right on public grounds. For instance, if the Bill contains any provision that seems to conflict with general legislation or with the policy of Parliament in regard to railways, we should call attention to that. We do not go at all into the commercial merits of particular schemes; that is not our province.

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1717. You consider it your province, as guardian of the public, to take care that the Committee are informed of any way in which the public interest is likely to be injured by that Bill?—Yes, I think that is really the sense in which we report.

1718. You are aware of course, are you not, that those large reservoirs have in them the possibility of great danger to life?—Yes.

1719. And therefore, is there not a more *primâ facie* ground why the Government, as guardians of the public, should see that they are safe than is the case even with regard to railways?—No doubt there is great danger to the public from the bursting of those reservoirs, but it may be much more difficult to provide for security in the case of reservoirs by inspection than in the case of railways. I suppose that it is true that in the case of a railway, everything is pretty apparent, as it were, upon the surface, and that it is not difficult for an inspector to judge as to whether or not a railway is in a condition to be opened to the public. For instance, he can judge of the sufficiency of the establishment for carrying on the business; he can also judge (and that is a very important part of an inspector's duties) with regard to the mode of signalling, and can see that all that has been provided and is in an efficient state previous to the opening of the line. By looking at many of those things as an experienced man he can judge of them, and he can judge pretty well the condition of the permanent way, and, to some extent, I suppose, of the embankments, and of the ballasting of the line. But in the case of a reservoir it is very difficult, and almost, I should suppose, impossible for an inspector who had not known what had been going on underground to judge whether or not it was in a fit state to be allowed to receive water.

1720. You would consider, would you not, that if there be any conditions which engineers of reputation are generally of opinion ought to be fulfilled by reservoirs, it would be advisable for the Government to take steps to ascertain that those conditions have been complied with?—The difficulty which I see in that is that I am afraid that the engineers would not be agreed upon what are the essential conditions for the safety of a reservoir. If there were certain things which beyond all question were absolutely essential, and without which a reservoir ought not to be allowed to receive water, no doubt it would be quite possible to see that those conditions had been complied with if the inspection took place in the course of construction.

1721. Do you see anything to operate against the suggestion that it should be necessary for the Board of Trade to send a Report to the Private Bill Committee, before which the undertakers of any reservoir appeared, in the same manner as they do to a Railway Committee?—It is a matter which I have not very much considered, but it does

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does not appear to me that there is any great objection to their making a report. But our reports on Railway Bills have no bearing upon the sufficiency of the proposed works, and, after the Bill has been passed, there is the difficulty, I think, that our inspectors, if they are to advise, would not be considered better advisers than the great civil engineers who are employed by companies to construct their works.

1722. Would not that depend upon the character and the competency of the inspectors whom you employed?—I think that it is not very likely that Government inspectors, though they might be very able men, would be so experienced as persons who are employed in the construction of works, and who, of course, have felt a much greater responsibility than the mere giving of opinions, and whose reputation and whose fortune depend so very much upon the success of the undertaking.

1723. Does that answer imply that you do not think that Government would be prepared to pay the sum necessary to secure the services of a very competent engineer?—I think that they are very good men, but they cannot have the same practical experience which men have who are themselves employed in the construction of works.

1724. *Chairman.*] Would it not be an additional security if the Board of Trade were made acquainted with all the facts connected with the formation of the reservoir, and if the responsibility were cast upon the company by the full knowledge of what they were doing; and could not that be done by a man who was not of first-rate engineering talent, in order that the Board of Trade should be made thoroughly cognizant of all that was going on for the purpose of communicating that statement which was made to them to the company; would not the responsibility of the company be enhanced by the mere fact of that information being communicated to them?—If the Honourable Chairman means that an inspector should report to the Board of Trade what is going on in the construction of a given reservoir, and that if he finds fault with anything that is being done, we should communicate his opinions to the company, and leave them after receiving those opinions to go on with the works or not as they might think fit; and if I am asked whether, in my opinion, that would increase the responsibility of the company, I will state that I think that it would leave the responsibility of the company pretty much where it is. It certainly could not have any tendency to decrease it except in this respect, that they might plead that they had been prevented from acting upon the advice of their own engineer, and that for the sake of escaping the responsibility they had taken the advice of the Government engineer, and that therefore they could not be held so entirely responsible as they would have been if they had been let alone.

1725. That is supposing that they have altered their plans in consequence of the suggestions of the engineer; but supposing that they did not alter their plans, and that accidents happened, then would not their responsibility be enhanced, because it would be stated to the jury who had to try the matter that those people were warned?—I think that then their responsibility would be increased.

1726. Mr. *W. E. Forster.*] Supposing that they followed the suggestion of the Government engineer, contrary to the suggestions of their own engineer, and after all, there was an accident, would not their responsibility then be diminished?—I suppose it would.

1727. The suggestions which have been made to the Committee by Mr. Rawlinson are as follows: First, that information should be given to the Board of Trade containing the exact plans, and an exact description of the site, in order that they should be able to take care that the Private Bill Committee were informed of those plans; I presume that you would see no objection to means being taken by which the Private Bill Committee should have before them the actual plans and description of the site of the proposed reservoir?—But would not that be so in any case; and those are not matters that, in the case of Railway Bills, the Board of Trade at all interfere with.

1728. The object is to prevent its resting in the discretion of the opponents of the Bill to compel, or of the promoters of the Bill to offer that information which they might not incline to do if they agreed together, but to make it necessary that the Private Bill Committee should have that information?—I certainly think that when a Committee is asked to sanction the construction of those works to give powers to persons to do things which they could not do under the ordinary law without the sanction of Parliament, all the information that can be supplied to the Committee ought to be given; I see no objection whatever to giving any information with which an inspector could supply them; but that supposes a preliminary investigation, which is never made by the Board of Trade in the case of Railway Bills.

1729. The suggestions which Mr. Rawlinson makes with regard to inspection during the making of a reservoir are to this effect: not that the Government inspector is to take upon himself any responsibility by offering opinions as to how the reservoir should be constructed, but simply that he should see that certain conditions which have been agreed upon by engineers generally should be fulfilled in that particular case?—Yes.

1730. Do you not think that in the one case there would be no danger in the Government taking upon itself the responsibility, and that in the other case there would be considerable danger, because if it is merely required that certain well-known conditions, such as thickness of puddle-wall, or necessity of slope, should be fulfilled, it may be quite necessary for the Government to see that they are so; but on the other hand if their inspector takes upon himself the duty of advising as to how the reservoir is to be constructed, would you not in that case think that the Government might be responsible for the consequences of that advice being carried out?—I think that that would be so if they advised as to construction; but assuming that there are certain conditions admitted to be essential I do not see why a Government officer should not ascertain that those conditions are complied with, that is, assuming that there are such conditions agreed upon by engineers in general.

1731. So much with regard to inspection during construction; it has appeared in evidence from two or three competent engineers that one of those great accidents certainly, namely, the accident at Holmfirth, arose chiefly from the reservoir being out of repair, and that any competent

petent Government inspector would have found out that it was out of repair and would have given information to the Government which would have put them in possession of that fact; do you not think that that case is alone a reason, considering the enormous danger to life, why the Government should have it in their power to send inspectors to make periodic visits to find out whether those large reservoirs, are in a safe condition or not?—If it be true that an inspection such as you describe would detect any great mischief going on in a reservoir, I cannot see that there would be any objection to it.

1732. Have you any objection to state what payment you give the railway inspectors?—Their salaries are 700 *l.* a-year, rising by 50 *l.* a-year up to 1,000 *l.*

1733. Are they civil engineers?—They are all officers of the Royal Engineers.

1734. Mr. *Kendall.*] Is there a permanent staff of inspectors?—Yes.

1735. How many are there?—Three.

1736. Supposing that you frequently sent inspectors to a railway, do the shareholders of a railway pay any money at all for the inspection?—No.

1737. Is it entirely paid by the Government?—Yes; we pay them a salary, and we pay their expenses. It is difficult to know exactly the object which Parliament had in view in railway inspection, that is, such inspection as we are empowered to make after the line is opened, because we are expressly prevented, I think, by the very words of the Act of Parliament from authorising our inspector to exercise his power in any manner so as to interfere with the affairs of the company; it is for the sake of obtaining information.

1738. Are those permanent inspectors much employed, and is their time much occupied?—Very much so; because if any accident occurs, for instance, producing personal injury, then the company is obliged to make a report to us, and we send an inspector down, who inquires into the accident, to ascertain its cause. In fact, we are constantly sending down inspectors upon the representations of persons, and we send them when we think fit.

1739. But is it the case that they have nothing to do with the railway until it is ready for traffic and passengers?—Nothing.

1740. You would consider, would you not, that there must be constant superintendence in the case of those large reservoirs?—I am afraid that the circumstances are very different.

1741. Do you think that it would involve a very large cost?—It would, of course, involve an inspection going on during the construction.

1742. Mr. Bateman, who gave very full evidence before this Committee, stated that there really could be no conditions laid down so as to make it sure that a reservoir was perfectly safe, but that everything must depend upon the locality and so on, but he further stated that he felt sure that a very experienced man might have detected the evil which brought about that sad loss of life and property at Sheffield. If that be true, would it not be desirable to have a man of very large experience who moves about here, there and everywhere, and sees the different conditions of different works, and would he not be more likely from his large experience in all parts of England to detect that which a man of mere local experience would not be able to do?—I think that full responsibility being upon the companies who are the owners of the reservoir for any damage which might be done would be a strong inducement to them to keep a good look-out upon the works, and to take care that no mischief was allowed to go on if those persons were aware of it who were the most competent to judge.

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1743. Has not your experience led you to believe that people are apt to put great trust in a man as far as they know him, but who is a man who merely knows the locality and not the country at large, and that he is not so likely to hit upon a point of difficulty as a man of greater experience?—It may be so, and considering the very dreadful consequences that may occur, which no kind of compensation can meet, I certainly think it might be useful that there should be occasional inspections of reservoirs; as has been suggested, something might strike an inspector which might have escaped the notice of others on the spot.

1744. Lord *R. Grosvenor.*] When one of your inspectors has inspected a railway, and permitted it to be opened, is there anything in the world to prevent that company from altering anything that they like the very next day?—I am not aware that there is. We have no power of interfering with them after the line is opened, but they cannot refuse to allow our inspector to see what is going on, and that information may be obtained by us. It was intended that it should be in our power to obtain it with a view to the public safety, so that, in case the necessity arose, we might come to Parliament for any powers which seemed requisite, but the necessity has not arisen. There is a case which a little bears upon the question. It is very commonly the practice in Railway Bills to insert a clause giving the Board of Trade power to cause a bridge to be made to do away with the level crossing, and we are also frequently empowered to make regulations in reference to level crossings, for the safety of the public; thereby, in some degree, taking upon ourselves the responsibility in that particular. That is a small matter, but it seems to have been very much the practice on the part of Committees on Railway Bills to put that upon the Board of Trade.

1745. *Chairman.*] In order to ascertain the effect upon responsibility, in consequence of giving you certain powers over manufacturers, let me ask you whether it is not now the law that no man can sell a cable which is not stamped to signify that it has undergone a certain test, and have you ever found that that provision of the law has led to the manufacturer throwing the responsibility upon the tester?—The Honourable Chairman refers to an Act of Parliament which has been very recently passed, and which is now coming into operation; but there is a clause in that Act of Parliament which enacts that the responsibility is not affected at all by the provisions of the Act; that a person who sells a bad cable is just as responsible as he was before, whatever that responsibility may have been.

1746. Is it then the case that he cannot in fact plead the inspection in his own defence?—He cannot.

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APPENDIX.

Appendix, No. 1.

REMARKS on Reports and Evidence by certain Civil Engineers employed by the Waterworks Company, and also by the Corporation of Sheffield, to examine and report on the Works at Dale Dike Reservoir, above the Town of *Sheffield*, which failed in the Spring of 1864.—By *Robert Rawlinson*, Civil Engineer. London, 1865. App. No. 1.

In the report on the failure of the Dale Dike bank, dated 20th May 1864, and signed by myself and Mr. Nathaniel Beardmore, with respect to the recommendation of the jury at the inquest, "that the Legislature ought to take such action as will result in Governmental inspection of all works of this character"—that is, reservoir embankments—we state, "that any approval of plans or casual inspection of waterworks embankments, cannot ensure ultimate safety in such works. The responsibility must remain as at present, namely, with the engineers and persons immediately connected with the works." Since this time I have further considered the subject, and although I still feel most strongly how necessary it is to refrain from recommending that any inspection be authorised by Government which shall, in the least degree, have the effect of removing the full responsibility of waterworks reservoirs, when completed, from the proprietors and constructors.

I have come to the conclusion that certain conditions as to plans, details, and general information may reasonably be asked for, as also that clauses of a general character may be inserted in Waterworks Bills, where the reservoirs and embankments proposed to be made are of a similar character to the works at Holme Firth and at Dale Dike, Sheffield. The engineers who have recently advised the Sheffield Waterworks Company can find no cause for failure in the Dale Dike bank, but a "landslip and an accident;" it is advisable to consider the published opinions of other equally eminent but independent engineers, employed by the Corporation of Sheffield to examine these works, the Dale Dike and other embankments, and who have reported to the Town Council thereon.

Analyses of the Opinions of the Engineers employed by the Waterworks Company, and by the Town Council of *Sheffield*, as published.

Messrs. Simpson, Hawksley, Bateman, Fowler, and Harrison report, on behalf of the Waterworks Company of Sheffield, with respect to the site of the Agden embankment, "The strata of the original ground at the site of the bank are nearly horizontal, and there are no indications of landslips on either side of the valley anywhere near the bank." * * * * *

"The clay of which the puddle is composed, is good, and the general materials of the bank are excellent for producing solid work." * * * *

Remarks.—The side of the Agden bank is on the same geological formation as that of Dale Dike, which gave way, and is only about 1,800 yards distant in an easterly direction. With respect to the puddle-trench, and seat of the bank, I cannot express any opinion, as both were covered at the time of my inspection; but with respect to the character and quality of the material used in forming the bank, and also as to the mode of placing this material, the following evidence is deserving of grave consideration:—

James Leslie, of Edinburgh, waterworks engineer, states: "At Agden the materials consisted of stuff like quarry rubbish, and was being deposited from railway waggons in tips of not less than six feet or eight feet deep, like a railway embankment. Considers such a mode of construction in the highest degree objectionable, as a bank so formed will not only sink, or settle, rapidly and unequally, but may continue to sink, or subside, for many years after its construction."

David Stevenson, of Edinburgh, engineer, reports of the Dale Dike bank, and also of the Agden embankment, as follows:—"Dale Dike has been constructed in a most objectionable and hazardous manner. That much of the stuff employed in the bank consisted of large sized rubble stone, and was deposited from railway waggons, in tips of about six feet in height. Considers such a system of working totally inadmissible for reservoir work, because the larger clods or stones must invariably, under such circumstances, find their place of repose at the bottom of the face or bank, and thus produce unsound layers, or strata, in the embankment, and that such layers will be full of interstices calculated to admit the free percolation of water. * * * * * That he has no hesitation in stating that any reservoir constructed in a similar manner to the one at Agden, must be regarded as unequal to the important duty it has to perform, is not a sound engineering work, and cannot be considered safe."

John Murray, engineer to the Sunderland Harbour and Docks, and other hydraulic works, also reported, with respect to Dale Dike bank:—"It was evident that the materials of the embankment had not been deposited as they ought, in thin layers of twelve or eighteen inches, * * and the clods broken with carefully selected materials on both sides of the puddle wall; but had been deposited by waggon tips, six feet, or more, in thickness, without any punning whatever.

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This objectionable method would be followed by unequal settlement in so high an embankment, and would tend to damage the puddle wall. * * * * The errors I have pointed out, and the precautions neglected, induce me to come to the conclusions that the Dale Dike reservoir is defective in design and unsound in construction. My objections apply with equal force to the Agden embankment, so far as their principles of construction are alike."

Henry Conybeare, engineer to the Bombay Waterworks, reports, with respect to Dale Dike bank:—"The material of which the bank was composed was defective, being friable, and not capable of 'binding': it was loosely thrown in by waggons, in tips of from five to nine feet, instead of being evenly spread and well consolidated (by the passage of one-horse carts all over it) in parallel layers of only as many inches thick. A bank so put together must have settled greatly, and it is evident (from the fact of its being rendered impassible to the spray of the water) that sufficient allowance was not made for such settlement."

Peter W. Barlow, an engineer of varied practice, states, relative to Dale Dike bank, which had given way, that "the embankment is constructed of loose open materials, containing large masses of sandstone, tipped six or more feet at a time, and falling so as to ensure very unequal settlement and consolidation. * * * The whole of the materials should have been evenly disposed in thin layers, each carefully consolidated as the work proceeded, and no large masses should have been placed in the body of the embankment." Mr. Gunson stated in his evidence before the coroner, that Dale Dike and Agden banks were made of similar material, and in a similar manner.

Sir John Rennie also reported, as to Dale Dike bank, "that the mode of making the embankment was very objectionable, that the puddle wall was too narrow for such height, and the interior filling, on each side of it, was composed of sand, gravel, and large stones, promiscuously thrown, or tipped, by dobbin carts and railway waggons, in irregular layers, from six to nine feet deep. With such materials, so disposed, it would be impossible to prevent unequal subsidence, or to make the mass solid and impervious to water."

Charles Vignoles, the eminent engineer, reports as to the materials used in Dale Dike and Agden banks, as follows:—"It has been repeatedly stated, and admitted, that the materials and manner of construction are the same in the Dale Dike and in the Agden embankments. I say that the system is a bad one. I will explain:—too much rock has been put in, of sizes much too large, and suffered to go as chance directed and gravity impelled. No lines of rails should have been laid, nor rail waggons allowed. The layers of materials should have been of the least possible depth, carried entirely all over each course. It has been stated that the specification allowed of three feet tips:—that is by far too much, but the tips at Agden are double that depth and upwards. It looks more as if making a railway than a reservoir embankment. Unequal settlements, in such works, is a natural consequence." Mr. Vignoles further states, as to a "landslip" having caused the damage to the Dale Dike embankment, as set forth by the engineers consulted by the Waterworks Company, that in his (Mr. Vignoles') opinion, "the theory of a landslip having occasioned the destruction, is wholly untenable."

The reporters for the Waterworks Company, Messrs. Simpson, Hawksley, Bateman, Fowler, and Harrison, further state, with respect to the mode of constructing the Agden embankment, "The puddle wall is supported on each side by a mass of fine selected earth, about 30 feet in thickness laid in thin layers." In reply, I beg to state that I saw this work in progress, and saw waggon roads parallel with the puddle wall and close to it, tipping the ordinary coarse, rough, rubbly material, as described by Messrs, Leslie, Stevenson, Murray, Conybeare, Barlow, Sir John Rennie and Mr. Vignoles, as "Quarry rubbish," and "rough pervious material." I saw large stones and clods of earth falling on to the puddle, and named this to Mr. Gunson at the time, who stated that men were employed to throw such clods and stones back into the mass of the embankment. My own experience teaches me that where such work is in progress any such arrangement is frequently neglected, and I was informed that stones and clods falling on to the puddle were not regularly and at all times removed. On my first inspection of the Agden embankment, during the week ending Saturday the 19th March, the surface of the bank was ridged with material tipped, forming several waggon roads and tips. The puddle wall was many feet below some of these tips, and the entire surface of the bank was a mass of rough rubble and coarse earth on both sides of the puddle wall and close up to it. As Messrs. Leslie and Stevenson have remarked, the material looked like "quarry rubbish, as usually tipped to waste, and not in any degree like an embankment to hold up a large volume of water."

With respect to the cast-iron outlet pipes beneath the Agden embankment and the byewash, Messrs. Simpson, Hawksley, Bateman, Fowler and Harrison, reporting for the Waterworks Company state: "The discharge-pipes (at the Agden embankment) consist of two lines of strong cast-iron pipes, 24 inches in diameter, laid and jointed in the same manner as at Bradfield Dale Dike." * *

"After the conclusive testimony to the soundness and security of the similar arrangement which has been afforded at the Bradfield Dam (Dale Dike), we cannot doubt the perfect efficiency of these pipes."

Messrs. Simpson, and the other engineers associated with him, also say: "Since the accident (at Dale Dike) the discharge pipes have been carefully examined and tested. They have also been inspected internally by a man passing through them, and their lines and levels have been observed from without by means of candles of equal lengths, placed centrally within them. In these several manners the pipes have been proved to be accurate in their position (not having even bent under the pressure of the embankment), and perfectly sound and water-tight. This is a state of perfection which we had never anticipated."

This entire passage is a curiosity. The consequences are, however, far too serious, with the terrible facts of a destruction of human life, and destruction of property horrible and appalling, caused, in a great degree, if not entirely, by this line of outlet pipes. In my opinion the so-called tests and trials were absolutely worthless in every respect. The pipes are said to be water-tight, under a head of pressure greater than that of the reservoir when full. Such pipes, if tight at all, would easily bear five times this head, safely, and their being found tight, does not affect the question of their having been the cause of ultimate damage

damage to the embankment. The manner of jointing and laying these pipes is shown in my report (20th May 1864), Diagram No. 7. A double line of pipes is shown, laid on puddle (clay) some 30 feet thick, at the puddle trench and beneath the apex of the embankment. Through its whole length, of upwards of 500 feet, the bed of clay is compressible, to some degree, but greatest at the centre of the embankment, or line of puddle trench. To test this line of pipes now, and say the line is found to be true, is no proof that compression and motion have not taken place; there must have been a permanent bench mark to level from, before any such test can be worth making. A test as to accuracy of a line of water pipes, obtained by the flames of lighted candles placed within such pipes, cannot be relied upon as a test of truth that such pipes are in line, and affords no proof of their stability. Messrs. Simpson, Hawksley, Bateman, Fowler and Harrison are, however, surprised at the result of their candle work, as they report in these words:—"This is a state of perfection which we never anticipated."

The whole of the processes, as described, prove nothing worth knowing as bearing on the question of these pipes having fractured the puddle wall above them, at the point of crossing the same, and as indicated in Diagram, No. 7. If the pipes moved in any degree, a space or cavity would be left through the puddle wall, and water, under a head of 80 or 90 feet, finding access to and through such space or cavity, though no thicker than a sheet of paper in the first instance, would soon melt, and wash an opening through the clay, capable of doing all the damage which took place. It is, in my opinion, absolutely impossible that these cast-iron outlet pipes could remain as they were first placed, without some amount of subsidence, and no examination nor testing of these pipes, now or at any time after the accident, can be worth one moment's consideration, as offering facts on which to base an assertion that they had not moved. The test by water and hydraulic pressure may be proof that the joints are tight, but it is no proof that they may not have partially drawn in the lead by subsidence. The form and strength of joint cannot have prevented such drawing under sufficient pressure. The test by burning candles cannot seriously have been intended to throw any light on the subject. Nothing has been proved worth knowing by the recorded tests. There must have been a reliable record of levels made at the time the pipes were laid, and taken from some fixed bench-mark. There must have been accurate levelling over the entire line of pipes from such bench-mark before any case can be made out that these pipes have not moved (subsided).

Messrs. Simpson, Hawksley, Bateman, Fowler, and Harrison notice the position and dimensions of the cast-iron outlet pipes, as laid beneath the Agden embankment, and sum up as under:—"We do not hesitate to recommend that the execution of this work (the Agden embankment) be resumed without further delay." * * * *

With respect to the position of cast-iron outlet pipes in waterworks embankments, Mr. Beardmore joined me in reporting (page 9, Report, dated 20th May 1864):—"The objectionable mode of laying the outlet pipes most probably fractured the puddle wall at the point of crossing. * *

"Cast-iron pipes ought never to be laid under such conditions as these. A culvert of masonry, with an inner valve-well, as in the Bradford reservoirs, should have been provided. This culvert should have been on one side of the valley, and in solid ground, free from loose earth of the embankment. App. No. 1.

With respect to cast-iron outlet pipes being laid beneath waterworks embankments, Mr. James Leslie remarks: "Considers it was a highly objectionable course to pursue to lay such pipes under such an embankment in the manner in which these pipes were laid, and that the valves ought to have been on the inner end, and fixed in such a manner as that access could have been had to them even when the reservoir was full. That he considers it a much better course to pursue, when practicable, to drive a tunnel in the solid, at the end of the embankment, in which the pipes should be laid." * * * * * *

Mr. John Murray states—"I do not consider the laying of cast-iron pipes through so high an embankment, with valves at their lower extremity, is a safe and proper method of construction, inasmuch as they would be subjected to unequal pressure at their junction with the puddle-wall, and any defective pipe or joint could never afterwards be removed or repaired." Mr. Murray recommends a tunnel in solid ground, in which to lay the pipes. Mr. Conybeare recommends plugging up the present line of pipes on the inner end, and that a driftway or tunnel be driven through the solid ground on one side of the bank, and a new line of pipes, of double capacity, be laid through such driftway or culvert, built of ashlar, in cement, and of size to allow of repairs or removal of said pipes. Mr. Peter W. Barlow states, that "no pipes should be laid under an embankment, unless the embankment rests on a rock foundation, and the pipes are laid in excavations, so that they are well below the surface. In any such case the pipes should not be less than 3 feet 6 inches internal diameter, in order that they may be examined internally, and, if necessary, repaired."

Sir John Rennie "coincides in general terms in the condemnation of iron pipes, carried under and through reservoir embankments, the more particularly so in such a manner that they cannot be thoroughly accessible in every part. * * * *

"The proper plan, in my opinion, is to carry the pipes through the solid ground or strata, in tunnels of masonry, either on one side of the embankment or the other, but wholly independent of it, and that the pipes should be accessible at all times." * * * * * * * * * * *

Mr. Charles Vignoles observes, "that pipes very much larger should have been used, either of diameter sufficient to allow of internal inspection, laying them by driving a drift-way (or culvert) through solid ground at the side * * * or by forming a culvert through the hard material, at one end of the bank, such culvert being of sound ashlar stone, set in hydraulic cement, and sufficiently spacious to lay one or more pipes, and to allow free access for examination and repairs."

In my evidence before the coroner at Sheffield, I stated no waterworks embankment ought to have a line of pipes laid through the embankment in such manner as to preclude any possibility of inspection or repair if failure takes place, or means of renewal if a pipe wears out. I hold that an engineer ought to be master of his work, and that his work should not be master of him. This opinion I retain, and it is a gratification to find that men so eminent as Messrs. Leslie, Stevenson, Murray, Conybeare, Barlow, Sir John Rennie, Vignoles, and Beardmore, agree in the opinion that an outlet-tunnel, culvert, or drift-way in the solid

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solid ground, in which to lay the pipes and valves, so as to admit of inspection at all times, and of repairs or renewal as may be required, is the only safe mode of working.

The entire question of waterworks reservoir embankment-making deserves more attention than has been given to it. The Holmfirth embankment failed, and destroyed many lives and much valuable property. The Dale Dike bank, which suddenly burst on the night of the 11th of March 1864, destroyed property of the aggregate value of several hundreds of thousands of pounds, drowning and killing 238 persons.

With respect to the character of this (the Dale Dike) embankment, the jury stated in their verdict:—"We find that, in our opinion, there has not been that engineering skill, and that attention to the construction of the works which their magnitude and importance demanded." * * * * "That we cannot separate without expressing our deep regret at the fearful loss of life which has occurred from the disruption of the Bradfield (Dale Dike) reservoir."

Mr. James Leslie states, "That he does not consider the Bradfield (Dale Dike) reservoir embankment was constructed in that careful manner that the importance of the work required."

Mr. David Stevenson sums up his report, "That he has no hesitation in stating that any reservoir constructed in a similar manner to the one at Agden, must be regarded as unequal to the important duty it has to perform, is not a sound engineering work, and cannot be considered safe."

Mr. John Murray concludes, "The errors I have pointed out, and the precautions neglected, induce me to draw the conclusions, that Dale Dike reservoir is defective in design, and unsound in construction. My objections apply with equal force to the Agden embankment, so far as their principles of construction are alike." Mr. Gunson described the plan and mode of construction alike in both embankments.

Mr. Peter W. Barlow states, "I am of opinion that there was great lack of skill in the designing, and of efficient supervision of the works; and that the destruction of the Dale Dike embankment is to be attributed to the objectionable site and defective construction."

Sir John Rennie observes, "I do not consider that there has been evinced in the construction of the works of the Sheffield Waterworks Company, that degree of engineering skill which their importance and magnitude demanded. I think that the failure of the Dale Dike reservoir and the similar construction of the Agden reservoir now in progress clearly establish such want of skill, and that the corporation have just reason to doubt the safety of the other reservoirs."

Mr. Charles Vignoles states, "In my opinion and judgment the system of construction adopted by the Sheffield Waterworks Company, at the Dale Dike and Agden embankments, was in many respects erroneous; that proper engineering experience was not brought to bear in the designs and specifications, and that great want of care and skill, together with evident deficiency of supervision are manifest in the carrying out of the operations." * * * * * "The officers of the Company seem to have despised all experience not within their own limited range, which has consisted in repeating themselves; * * * * and would go on repeating the dangerous practices, if allowed by the Legislature."

Having considered the published evidence of so many eminent men, members of the Institute of Civil Engineers — Messrs. Leslie, Stevenson, Murray, Conybeare, Barlow, Sir John Rennie, and Vignoles, who have independently examined the Sheffield Waterworks (Dale Dike embankment) which gave way; and being of opinion that cast-iron pipes should not be buried beneath the loose mass of any embankment, as at Dale Dike, so that they can never be reached for examination, repairs, or renewal, I consider that some legislative steps should be taken to prevent, as far as possible, the recurrence of such terrible failures as have taken place at Holmfirth, at Dale Dike reservoir, above the town of Sheffield, and, in a lesser degree, at other places.

My reasons for troubling the Committee with this Report, are two-fold, namely, to show that the assertion relative to the cause of the accident to the Dale Dike embankment being entirely due to a land slip, is merely an assertion without proof; as also, that professional men equally eminent to Messrs. Simpson, Hawksley, Bateman, Fowler, and Harrison, have carefully examined the embankment in its ruinous state, and have formed other conclusions. To settle the question of land slip, or no land slip, the seat of the ruined embankment must have been bared; this has not been done. The confusion found in the materials now spread in ruins, is, in my opinion, entirely due to the violent effects of the torrent of water during the period of failure and destruction. A land slip, if such has occurred, must have been very partial in its effects, as the cast-iron outlet-pipes under the deepest part of the embankment, are reported by the company's engineers to have been tested and found to be unmoved. My opinion is, that no such land-slip did take place previous to the failure of the embankment, but that the line of cast-iron pipes, and especially the most objectionable manner of laying such cast-iron outlet pipes, are to blame for the accident. Cast-iron fails frequently, under conditions less severe than these pipes were subjected to, but an actual failure by fracture, or by rupture of a joint in the lines of pipes was not necessary to lead to mischief; any sinking in the bed of puddle beneath the lines of pipes, however small, must have left a cavity in the clay above the pipes, and a creep of water, once set up, would be a fatal blemish; no means at the command of the engineer could stop such cause of leakage.

Since the failure in the Dale Dike embankment I have examined, for Government, many reservoirs in Yorkshire and in Lancashire, and find no general or leading rules followed in the design and execution of such works. Some large reservoirs have failed, and, in my opinion, mainly in consequence of faulty designs and defective modes of construction; other embankments have not failed, but have elements of failure within them, in timber and cast-iron outlet-pipes, culverts, cloughs, and defective byewash space.

Many reservoir banks are, in my opinion, too weak, and the water is stored at a level, too near that of the retaining embankment; and I have found banks where subsidence had taken place, and had not been attended to, as was the case at Holmfirth. The machinery at some reservoirs I also found out of order, valves having "set" or rusted up, and some valves have had far too great a head of water upon them. All the valves for working a reservoir should and may be placed where they can be examined and repaired, and

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no valve need be worked under a deeper head of water than 20 feet. Deep embankments ought to have two or more outlet culverts with valves complete, so as to enable the engineer to test a reservoir, and to work it in stages of 10, 20, or 30 feet.

Government inspection of plans of reservoirs may be useful in this way. If certain information is asked for by Government before sanctioning plans of reservoir embankments, more care will be used, by engineers and promoters obtaining information as to drainage, area, rainfall, strata, and floods.

If certain general principles are established, young engineers will have rules to guide them so far, and in preparing plans in detail for inspection, more inquiry, examination, and care will be exercised in future than has been heretofore bestowed on plans and details. Since the failure at Sheffield a small reservoir gave way at Hartington, near Whitehaven, because the relative proportions of byewash space to area of gathering ground had not been attended to.

Inspection of reservoirs before and during filling may be useful, as more care will most probably be bestowed under inspection than without it. Inspection at regular intervals, after completion and when in work, to see that the embankments are sound and at their full level, that the byewash is unimpeded, and that the valves and working machinery are in order, will prevent such destruction as took place at Holmfirth, where the embankment had been negligently allowed to subside below the masonry byewash, or overflow-well; goits, culverts, cloughs, byewashes, and working machinery do now get out of order, as at the Holmfirth reservoir, and it is the business of no one to report this state of things so as to ensure a prompt remedy.

I do not consider that it is the duty of Government to teach engineers their business, nor in any way so to interfere with plans and modes of construction so as to remove the entire responsibility of the safe maintenance of the embankments and works from the proprietors promoting, and the engineer designing and executing such works. In railways, Government requires certain modes of construction in laying the rails, points, sidings, and crossings to be adopted, and defined tests to be applied to bridges and viaducts, before the lives of the general public are risked; but Government engineers are not supposed to be responsible, in any degree, for the works after they have reported; so of reservoir embankments, certain rules may be laid down with regard to modes of construction, which shall ensure strength and correct principles, without unduly fettering the engineer in his subsequent constructive operations. The test of gradually filling a reservoir by stages, and under inspection, will, in my opinion, be an additional means of safety to the public.

Appendix, No. 2.

App. No. 2.

GENERAL CLAUSES proposed for RESERVOIRS to be hereafter constructed.—By *Robert Rawlinson*, Civil Engineer. London, May 1865.

1. PLANS and sections of the proposed site of any reservoir, geologically coloured, should be produced on a scale not less than six inches to the mile.

2. The area of the gathering grounds proposed to be affected, to be given in statute acres.

3. The fall of rain in the district for not less than seven years, ending at the date of application for the Bill, to be produced.

4. Trial shafts shall be sunk in the centre line of the site of the proposed embankment, at distances not greater than one hundred feet apart, and the results and details relative to the stratification obtained from such trial shafts shall also be produced.

5. Plans, in detail, of the proposed works, at a scale of not less than 20 feet to one inch, shall be produced, and be submitted for inspection and sanction to the Home Office or to the Board of Trade; such details shall exhibit the embankment in plain and cross sections at the deepest part of the proposed embankment. The detail drawings shall also show—

a. Top bank width of embankment.
b. Inner and outer slope of bank.
c. Puddle wall and puddle trench.
d. Relative level of bye-wash below top bank level.
e. Outlet works.
f. Bye-wash and bye-wash conduit.

6. The capacity of the reservoir shall be stated in cube feet.

7. No puddle wall shall be less in width at the top water line, in any part of the embankment, than 10 feet, and shall increase for each foot of vertical height not less than one inch in width on each side of such puddle wall, down to the ground line at the deepest part of the embankment. Similar proportions shall be preserved throughout the entire line of the puddle wall. The puddle trench shall be filled entirely with puddle.

8. The inner slope of an embankment shall not be less than three (3) horizontal to one (1) vertical. The outer slope shall not be less than two and a half ($2\frac{1}{2}$) horizontal to one vertical.

9. The finished top bank width of any reservoir shall not be less than the following dimensions, namely,

An embankment	25 feet	deep	not less than	6 feet wide.
Ditto	ditto	50 ditto	ditto	12 ditto.
Ditto	ditto	75 ditto	ditto	18 ditto.

Intermediate, or lesser or greater depths of embankment may have proportionately arranged widths.

10. The finished top bank level of any reservoir shall not be at less than the following elevation, above the edge of the bye-wash, or top water line of a full reservoir, namely,

An embankment	25 feet	deep	not less than	4 feet.
Ditto	ditto	50 ditto	ditto	5 ditto.
Ditto	ditto	75 ditto	ditto	6 ditto.

Intermediate, or lesser or greater depths of embankment may have proportionately arranged relative top bank and bye-wash levels.

11. Each impounding reservoir shall have full and free bye-wash space not less than three (3) feet in length for every hundred (100) acres of gathering ground; such bye-wash to be formed in the solid ground.

12. Cast-iron pipes, culverts of timber, or other material liable to decay, shall not be used for outlet discharge, or for overflow works, if required to be buried under or within any reservoir embankment in such manner as to preclude repairs, and endanger the structure by decay. Valves and sluices should be placed within the line of puddle wall, and not on any part of the outer slope of the bank.

13. A reservoir embankment shall, at all times, be preserved at its full height, and the relative level of the top bank and bye-wash be preserved.

14. All reservoir works and apparatus, such as goits, culverts, tunnels, conduits, bye-washes, cloughs, sluices, valves, and working machinery connected with such cloughs, sluices, and valves, shall be maintained sound and in good working order.

Appendix, No. 3.

OBSERVATIONS upon, or OBJECTIONS to, Mr. *Rawlinson*'s Recommendations, by Mr. *J. F. Bateman*, C.E. App. No. 3.

CLAUSES 1 and 2. May be adopted, although the geological colouring would seldom afford any useful information; and a section on a scale of 6 inches to the mile would certainly be useless.

Clause 3. Would in many cases be impossible, and if insisted upon would prevent the introduction into Parliament of many useful measures. For instance, it could not have been complied with in the case of the Glasgow Waterworks, as no rain gauges had been established in the Loch Katrine district. All that could be reasonably expected would be the best information which existed, or which could be brought to bear on the subject.

Clause 4. Also, in many cases impossible, as objecting landowners might prevent such trial shafts being made. Sufficient information may generally be obtained without this, nor would the determination of the character of the ground beneath the embankment be sufficient for determining whether the reservoir itself would be water-tight.

Clause 5. No objection to an obligation to this effect.

Clause 6. No objection.

Clause 7. These are suitable dimensions, but it is undesirable to introduce anything like a specification, as embankments may be made water-tight in many ways without a puddle wall.

Clause 8. The same observation applies here. A slope of 3 to 1 may be insufficient in some material, as, for instance, in soft clay, if the embankment be high; and 2½ to 1 would be much more than sufficient if the outside of a bank were, as it frequently is, composed of rock or gravel.

Clause 9. No objection to these dimensions for earthen embankments, except that modes of construction may be adopted to which they will not be applicable.

Clause 10. These dimensions, again, depend on many circumstances which are not here referred to.

Clause 11. To prescribe the proportionate length of a waste weir, the same, in all cases, would be absurd. It ought to vary according to the rainfall; the elevated or precipitous character of the ground from which the rain will flow; the area of the water-surface of the reservoirs, as compared with the area of the collecting ground; and the height of the bank above the top of the waste weir. Again, although it is very desirable that the waste weir should be formed in the solid ground, there may be cases in which this would be almost impossible, and where other equally safe and less expensive modes might be adopted.

Clause 12. There is no objection to the principle of the first part of this clause; but the latter part, as to valves and sluices, would be altogether inapplicable in many cases, and dangerous in others.

Clauses 13 and 14. Need no remark.

23 June 1865. *J. F. Bateman.*

Appendix, No. 4.

App. No. 4. PAPERS handed in by Mr. *M. B. Jackson,* and referred to in his Evidence of 2 June 1865.

RE SHEFFIELD WATERWORKS.

MEMORANDA respecting the Bursting of the Bradfield Reservoir belonging to the Sheffield Water Works Company, on 11th March 1864.—By *M. B. Jackson,* Esq., C.E.

The possible causes of the burst of a Reservoir Embankment such as that at Bradfield, are:—

1st. An insufficient quantity of material in the embankment, when it would burst or give way through sheer weakness.

I am distinctly of opinion that there was abundance of material in the embankment of the Bradfield Reservoir, that it did not give way for lack of material, and that no blame can be attached to the designer on this score.

2d. Too great a steepness in the slopes, in which case the inside, or that next the water, might be injuriously acted on by the wash, and the outside of the bank might slip.

I am distinctly of opinion that neither the inside nor the outside slope of the Bradford Reservoir was too steep; that they were both well calculated to stand, and that no blame can be attached to the designer on this score.

3d. An insufficiency of puddle in the puddle-wall, or bad puddle.

On the score of what is a sufficiency of puddle, there is a wide diversity of opinion. Not having seen the plans of the Bradfield Reservoir, I am unable to say what were the dimensions of the puddle-wall, but it appears to me, so far as I can ascertain, to have been sufficient, though probably I should myself have made it wider or thicker at the surface of the ground. I am distinctly of opinion, however, that the Bradfield Reservoir did not fail through any deficiency of puddle in the puddle-wall; and I am also of opinion that it did not fail through the puddle being of bad quality, as, on the contrary, it appears to me to have been of good quality. It is right to observe here that a conclusion drawn from an inspection of the gap formed by the burst, is apt to be both unfavourable and erroneous, and that a clean cut made across the bank would wear a very different appearance.

4th. An insufficient provision for carrying away the waste water. On the fixing of the waste-water weir too near to the top of the embankment, when the water would be liable to wash over the embankment, and so destroy it.

Not having seen the plans of the Bradford Reservoir, and not knowing the area of the catch-water basin, or gathering ground, &c., &c., it is not in my power to speak with certainty on this subject, nor is it necessary to do so, as it is certain that the embankment did not give way through any insufficient provision on this score. I am of opinion that the waste-water weir was not too near to the top of the embankment. I should receive with great doubt the stories that previous to the burst, and prior to the bank slipping, the water was washed over it in large quantities, for the wreck left at high-water mark on the pitching, as observed by me on Saturday the 12th instant, shortly after the burst, which ran in an almost even straight line from end to end of the embankment, save where interrupted by the gap, and which was about the level of the waste-water weir, convinced me that prior to the embankment slipping, such could not have been the case. I am distinctly of opinion, therefore, that the embankment did not give way from this cause. The masonry in the waste-water channel is all that could be desired.

5th. A neglect in not carrying out the work in thin consecutive layers, finishing each layer throughout before another was begun, so that the settlement might be equal.

The importance of carrying out the work in thin consecutive layers, and of finishing each layer before a second one is commenced, cannot be over estimated. In this respect, judging from what I have heard, and the manner in which I have seen the work being carried out at the adjacent reservoir now being constructed, I am of opinion that sufficient care has not been exercised. In a letter addressed by me on the evening of Saturday the 12th instant, to the editors of the Sheffield daily papers, which appeared in both papers on Monday the 14th instant (a copy of which is appended), I said that in a work of the kind, I should always err on the side of caution; should forbid the use of waggons and rails in making such an embankment, and should insist that it should be carried from and through in consecutive layers of not more than two feet in thickness, and that these precautions, with the use of dobbins and carts instead of waggons and rails, tended greatly to consolidate the banks, and obviate the danger of slips; but in this respect, the specification for constructing banks by Mr. James Leslie, of Edinburgh, is a model for imitation. I would especially direct attention to this specification, to be seen in the Minutes of Proceedings of the Institution of Civil Engineers, vol. 18, page 389, and would remark that as the material for the embankment is not the best of material, though doubtless

doubtless the best that is to be obtained in the neighbourhood, and not by any means so bad as many persons contend, every precaution to have sound and unimpeachable work should have been taken. Contractors will always use waggons and rails in preference to dobbins and carts, if allowed; they will always shift or remove their roads as few times as possible, and they will seldom object to the depth of a tip on the ground that it is too deep. I am of opinion that this embankment has probably not settled equally; that an unequal settlement has probably drawn a joint or joints in the pipes, allowed the water to escape into the embankment at the back of the puddle, torn down the embankment, and set the whole of the water in the reservoir free.

6th. A too hasty filling of the reservoir, inducing hasty settlement.

The too hasty filling of the reservoir is to be deprecated, but it appears to me that, with the means of control at the disposal of the engineer, this could not be avoided. If on no other account, it is clear that the pipes from the reservoir were too small. I call attention, however, to the fact that had the reservoir bank been constructed in thin layers, as specified by Mr. Leslie, and each layer that was put on in dry weather been moistened with water, the objection to filling the reservoir quickly would not have been so great; a hasty or unequal settlement is not unlikely, nay, it is very likely, to crack a bank.

7th. An insufficient guarding against uprising springs in the bottom. A neglect to provide for the draining of the site of the embankment under the outside slope, not securing a good foundation for the puddle trench, and an undermining of the foundations of the puddle bank.

The consideration of this part of the question is worthy of particular attention, and it is with considerable hesitation that I commit myself to a positive opinion before hearing from the engineer to the works, what steps really were taken in combating and overcoming the obstacles that were met with in the endeavour to obtain a good foundation for the puddle bank. One thing is certain, *i.e.*, that it is not of the slightest use to attempt to smother or keep back the water when uprising springs from fissures in a rock bottom are met with. All such attempts must be worse than useless, and free exit to the water must be given. It is possible, and it is probable, that water has found its way through the fissures in the rock bottom in this case, and got under the puddle, and if proper means have not been taken to collect it and lead it away clear of the foot of the outside slope of the embankment, this would be of itself sufficient reason to cause the outside slope of the embankment to slip, and the whole to give way.

8th and lastly. A failure in the cast-iron outlet pipes passing under the embankment, or by the water passing between their outer surface and the puddle.

Under this head, I enumerate the following possible cases:—

1st. It is possible (but not very probable) that a pipe might be burst through the internal pressure of the water. This possible case I dismiss from consideration, as nothing but the most culpable ignorance or carelessness could have allowed a pipe to be laid that would give way with a fair pressure of 90 feet.

2d. It is possible that one of the joints of the pipes may have blown or been forced out by the internal pressure; but for the same reason as above, I dismiss this possible case from consideration.

I have, however, in my practice, invariably had a recess or ring cast in the socket of each pipe, which is a great safeguard against a blown joint, as when the lead is run it acts as a dovetail.

3d. It is possible, and exceedingly probable, that as the reservoir filled and the embankment settled, a fracture was occasioned in one or more of these pipes; this also would be of itself sufficient reason to destroy the embankment, as there were not any sluices on the mouths of them, the outlet pipes.

4th. It is possible, and in my opinion certain, that the same cause, *i.e.* the settlement of the bank, has drawn or sprung or started the joints of one or more pipes, and allowed the water to pass into the outside slope of the bank with fatal effect.

It is to be borne in mind that with a joint once started, the internal pressure of the water would be sufficient to blow it completely out.

5th. It is possible and probable, if the pipes have not been tied or strapped together, that the simple pressure of the water on the sluices at the foot of the outside slope of the embankment has started one or more joints under the embankment; but on this point it is not possible to speak with certainty without seeing the plans.

6th. It is possible that the water has found its way between the outer surface of the pipes and the puddle with fatal effect.

General Conclusion.

I am of opinion that the direct cause of the disaster is to be attributed to one or more of the possible cases enumerated under the heading of Number 8. I have no hesitation in giving this opinion, because I do not entertain the slightest doubt that one or more pipes, or one or more pipe joints, have given way under the embankment; but it is also possible that a combination of two causes, each of which was in itself sufficient to account for the giving way of the embankment, has occasioned the catastrophe.

These causes are those specified under the two headings, Numbers 7 and 8. The statement (if true) that there was, previous to the burst, a sudden lowering of the water in the reservoir, would render it not improbable that, in addition to what might be escaping through a defective pipe, &c., under the bank, there was an additional vent through some fissure in the rocks; but in this case it is not to be forgotten that, although there might be a leakage under the embankment through some fissure, it by no means follows that the water would rise immediately beneath the bank; the vent might be some hundreds of yards below; in fact, it is possible that there might be a continuous leakage through fissures in a rock bottom under the embankment of a reservoir, and yet the reservoir itself be perfectly safe. So in like manner, a reservoir embankment constructed over a rocky bottom with springs may be considered perfectly safe

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provided it be properly constructed, and the water from the springs collected and led away clear of the foot of the embankment. How far it was prudent to bare the rock in the inside of the reservoir, by obtaining the material for the embankment thence, is a subject for consideration; but I see no danger to the embankment itself by so doing, provided that due precaution were taken to lead away any water that might get under the puddle, clear of the outside slope. The question of baring the rocks would in that case simply be a possible waste of water, to be balanced by a great probable saving in the first cost of the reservoir.

On the subject of the pipes under the embankment, as the most important subject of all, I would remark that it is one of those singular errors in judgment, which, as has been justly remarked, has been committed by the most eminent engineers from Telford downwards. I have thought much on this subject long before the late melancholy accident or catastrophe, and I have arrived at the deliberate opinion that no pipes ought to be laid under an embankment under any circumstances, but that they should be placed in the solid, by tunnelling or side trenching, and that there should always be a sluice on the mouths of the outlet pipes, so that it may be possible to make good any defect, or otherwise that the pipes should be sufficiently capacious to empty the reservoir and admit a man for repairs.

Any reservoir with pipes through its embankment which does not fulfil these conditions cannot be looked upon as anything else than a temporary work; it is not a question of failure at all; that is sure to take place; it is only a question of time; and I am of opinion that in many of those cases where reservoirs are leaking, the original source of the leak or its fountain-head is in some sprung joint in the pipes passing under the embankment.

It is not to be argued that because reservoirs with embankments 30 or 40 feet in height have stood for years with cast-iron pipes laid through them, that they are safe; such is not the case; cast iron is a perishable as well as a treacherous material. If then an embankment of only 30 or 40 feet in height is not safe when depending for its security on its cast-iron pipes alone, what are we to think of one of 90 or 100 feet in height?

On the subject of cast-iron pipes through made embankments, I would further refer to the expressed opinions of Mr. Robert Rawlinson at page 392 of vol. 18 of the Proceedings of the Institution of Civil Engineers, and of Mr. Hawksley at page 386 of the same volume.

Matthew Bullock Jackson.

23 March 1864.

CORRESPONDENCE.

The Cause of the Bursting of the Bradfield Reservoir.

To the Editor, 14 March 1864.

I HAVE this day spent some hours in examining the embankment of the Bradfield Reservoir, with a view to ascertain the cause of the lamentable catastrophe which has just occurred, and I forward you the following professional opinion, which a rigid investigation will establish as correct.

There are or were two lines of pipes passing through the embankment near the bottom.

Either the extra pressure caused by the increased depth of water on the filling of the reservoir occasioned a fracture of one or more of these pipes, and forced the water through the fracture into the earth forming the outside slope of the embankment, inducing a settlement and a slip of the outside slope immediately preceding the burst; or the same cause, *i. e.* the extra depth of water and pressure, occasioned a leakage along the outside of the pipe or pipes between it or their surface and the puddle, and had the same effect. of the former were the cause, it can be ascertained by stripping or uncovering the pipes; and it would have been safer to have had sluices on the mouths of them (the outlet pipes), and also to have had them lined with a tube of wrought iron. And to obviate the danger of the second, I have with success applied shields bolted in two halves over the pipes. I do not see, up to the present moment, the slightest cause to impute blame to any one; but at the same time, in a work of the kind, I should always err on the side of caution—should forbid the use of waggons and rails in making such an embankment, and should insist that it should be carried forward and through in consecutive layers of not more than two feet in thickness; these precautions, with the use of dobbins and carts, instead of waggons and rails, tending greatly to consolidate the bank and obviate the danger of slips.

I am, &c.

An Engineer and Fellow Townsman.

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REPORT of *Matthew Bullock Jackson*, Esquire, late Chief Engineer for the Melbourne Waterworks, and other Waterworks and Public Works in Australia.

Queen's-terrace, Glossop-road, Sheffield,
Sir, 4 July 1864.

IN reply to your letter of the 10th of June, requesting me to give my opinion as to the propriety and safety of laying cast iron pipes under the embankment of a storage reservoir, of such a size as not to admit of an internal examination, and without provision for exterior inspection, I beg to state that I still entertain the same opinion as I expressed at the inquest before the coroner, on the 24th of March last (*see* Question 962* of the official report), and in my report of March 23d, now in your possession, *i. e.*, "that as cast iron is a perishable material, as well as a treacherous one, any storage reservoir which has pipes so laid under its embankment, or embankments, is certain to fail eventually, and it is only a question of time as to how long the pipes will last," which will be determined chiefly by two circumstances:—

1st. The nature and quality of the water supplied through them; and
2d. The nature and quality of the puddle surrounding them.

It is *possible*, I have no doubt, that pipes may last 50 or 60 years, perhaps more, but on the other hand I have myself known pipes that have been laid in clay or puddle that was impregnated with ammoniacal salts, *eaten away and destroyed by an action on the outside in less than five years*, and I have further known instances of pipes having been destroyed in a similar short period of time by the action of water on the inside, when such water has been impregnated either with ammoniacal salts or sulphur.

The action of water so impregnated on cast iron is well known to many of the coal viewers in the North of England, where its effects are frequently witnessed on the cast iron tubing or lining of pit shafts.

There are other causes that may operate to shorten the duration of the existence of a line of pipes laid under an embankment, as specified by you, which it is unnecessary to enumerate, but I would again point out to you the fact, that the longer a storage reservoir has existed, with pipes as specified by you so situated, the nearer is it to its inevitable destruction, unless preventive steps be taken, and that such destruction may take place, and most probably will take place, without the slightest notice or warning; I should therefore strongly advise that all such pipes should be permanently plugged up, and that fresh means should be provided for the discharge of the water, *which in most cases, and especially on the Sheffield works, can be done at a very moderate cost. I may mention that I am myself acquainted with no less than six distinct cases where pipes so laid have failed.*

My views respecting the cause of the bursting of the Bradfield Reservoir, and the steps which should be adopted to prevent the recurrence of so deplorable a catastrophe, are recorded in my report to the coroner, John Webster, Esq., handed in by me on the morning of the 23d of March (prior to any evidence being taken), and I beg to state that I still entertain substantially the same views as are therein contained and as were expressed by me before the coroner.

No. 1. Commencing with paragraph No. 1 of that Report (wherein I stated that it was *possible* for a reservoir embankment to burst or give way through having an insufficient quantity of material in it, when it would fail through sheer weakness,—but that I was distinctly of opinion that there was abundance of material in the embankment of the Bradfield Reservoir, that it did not give way through lack of material, and that no blame could be attached to the designer on that score), I beg to say that my opinion on this point is exactly the same as I then stated. I consider the mass of material to have been sufficient, and as a doubt has been raised as to the sufficiency of the width of the top of the embankment (12 feet), I would point out the fact that at the top of the bank there was not any water pressure, that at one foot from the the top the bank was 17 feet thick, at two feet from the top 22 feet thick, and at five feet from the top, or at high-water mark, 37 feet thick; and I am therefore of opinion that the width of the top was sufficient, when there was no contingency to be provided against of having afterwards to heighten or raise the bank, more especially as it is no uncommon thing to find the embankments of large reservoirs only four feet higher than the bye-wash, instead of five feet, as in this case. I would further point out the fact, that *it is only barely possible to build a bank which shall fail through sheer weakness, as any embankment the slopes of which will stand is in the mass, and providing there were no other disturbing cause than the weight of water which could be brought against it, big enough.*

No. 2.

* 962. Mr, *Smith.*] If you had known that this had been in constant use for 10 or 15 years, you would have thought it a fair trial?—If I had not had the thing forced upon me by experience, I should think it safe to do it; but after the accident I have seen it seems the simplest thing in the world, and only a foolish thing to imagine how you could do it. It appears very simple after the thing is done. When you consider that cast iron is not only a perishable material but a treacherous one, you may come to the conclusion that if you have not means for getting to the pipes to repair them, that it is not a question of failure or no failure in the reservoir, but a question of the time when they will wear out.

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No. 2. Referring to paragraph No. 2 of the same Report (wherein I stated that in my opinion no blame could be attached to the designer of the reservoir on the ground that the slopes of the embankment of it, the Bradfield Reservoir, were too steep), I am still of the same opinion, though, as stated by me before the coroner, I should myself have preferred an inside slope of 3 to 1,—"this is to avoid the liability of injury from the wash of the water on the face of the slope."

No. 3. Referring to paragraph No. 3 of the same Report (wherein I stated that it was possible for a bank to give way by reason of the puddle being of bad quality, and also by reason of the quantity of puddle being insufficient; but that I considered that the quality of the puddle used at Bradfield was decidedly good, and that although I should myself have used a greater proportion of puddle, and should more especially have made the puddle wall wider or thicker at the surface of the ground, yet that on the score of what is a sufficiency of puddle there is a wide diversity of opinion, and that I was not of opinion that the Bradfield bank failed through an insufficient provision of puddle in the puddle *wall*), I am still inclined to think, "as stated by me before the coroner," see Questions 803 and 804* of the official Report, "that the puddle *in the wall, being of first-rate quality*, was sufficient to stand the pressure of the water." "This, however, is on the assumption that it was perfect throughout," and I am of opinion that with so high a bank there was not in this instance a sufficient margin for safety: I consider that it is very questionable whether it was necessary to go to a depth of 60 feet with the puddle trench, and that possibly a partial lining of the trench, and a plugging of the leaky fissures in the rocks, would have been a *quicker, better, safer* and *cheaper* course to have adopted, as probably a depth of 15 or 20 feet, or less, would then have sufficed, but it is impossible to speak with certainty on this subject without having seen the work in progress. As a general rule, with a rock bottom, I do not consider it to be advisable to sink a puddle trench to such an extreme depth, as there are, "in many instances," other means of obtaining an equally useful practical result at less cost; but if the engineer for this work *really found it necessary* to excavate the puddle trench to a depth of 60 feet (as appears in his evidence), he should have widened it, the puddle trench at the bottom (which would also have given the puddle wall an increased width at its base), as otherwise there was a danger of the water being forced through the puddle at the bottom of the trench. Some engineers would have advised that in this case there should have been a puddle apron carried from the puddle wall to the foot of the inside slope, and would have considered it an advisable precaution, in addition, to have provided a check trench under the puddle apron, as described by me in my pamphlet on the Melbourne Waterworks, and would have stipulated that the puddle apron should have extended under the whole of the seat of the inside slope of the bank (and I have been informed that there was a puddle apron in this instance, which extended under a part of the inside slope of the bank), but I entertain serious doubts as to whether any puddle apron is, in such a case, of any use. On the puddle *trench* and puddle *wall*, in my opinion, must mainly depend the safety of any reservoir embankment. It may not be uninteresting to remark, that the thickness of the puddle wall in the Bilberry Reservoir at Holmfirth, which burst in 1852, was 16 feet at the base and 8 feet at the top; the dimensions of the puddle wall at Bradfield being 16 feet at the base and 4 feet at the top. The Holmfirth bank, however, was not nearly so high as the one at Bradfield—the batter of the puddle wall being the same in both instances. I beg to repeat here my observation of the 23d of March (*vide* Report), that a conclusion as to the quality of the puddle, drawn from an inspection of the gap formed by the burst, is apt to be both unfavourable and erroneous, and that a clean cut made across the bank would wear a very different appearance."

No. 4. Referring to paragraph No. 4 of the same Report, on the provision for carrying away the waste water, or the fixing of the waste-water weir too near to the top of the embankment, when the water would be liable to wash over the embankment, and so destroy it, I beg to state that I entertain the same views as I did when I gave my evidence before the coroner (*see* Question 805† of the official Report, and Questions 910 to 922‡ inclusive). I think it would have been better to have continued the goit, or contour

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* 803. There is a sufficiency of puddle, and the puddle good?—The puddle is good, decidedly; although in my own practice I have put in a greater proportion of puddle; yet I do not suppose for a moment that the embankment failed on that score.

804. The puddle, then, is decidedly good and sufficient?—And I think sufficient; it is very good puddle.

† 805. You have no fault to find with the bye-wash, have you?—No, I have no fault to find with the bye-wash.

‡ 910. The *Foreman.*] Does he consider that better provision might have been made for the more rapid discharge of the water in the event of danger being apprehended; suppose danger had been apprehended in the morning, say, from the prevalence of a strong breeze acting upon the bank and the rapid filling of the dam, would it have been advantageous to have had a better and more rapid discharge than these two 18-inch pipes afforded?—(Mr. *Jackson.*) It would, sir.

911. The *Foreman.*] Could you have devised such?—(Mr. *Jackson.*) I could.

912. The *Coroner.*] You say it would be desirable to have more efficient means than the two pipes to discharge the water in the event of danger, and that you could devise such means?—Yes.

913. Now then, sir, will you tell us what means?—There were the means of forming a tunnel driven through the slope completely round, curved, or curved first, and then straight, and then curved again. (*Diagram on black board.*)

914. You mean round the end of the embankment?—Yes.

915. Any other mode?—And, in my opinion, it is by far the best way, and what I should adopt in any

contour channel, round the side of the reservoir which existed (as stated by Mr. Gunson in his evidence before the coroner) during the construction of the reservoir, as a permanent work; and I also think that it would have been better, in the case of a reservoir with an embankment of such a height, to have had a waste-water weir fixed, say 20 feet below the top of the bank, with a series of sluices in lifts, "or as described by me before the coroner," as also that the pipes should have been larger; but at the same time I would beg to remind you that the designer doubtless considered that when the "Strynes Reservoir," or the one intended to be built across the same valley higher up the stream, was constructed, that this bye-wash would be sufficient; and, in my opinion, had the upper reservoir been made first, it would have been found that the capacity of the bye-wash afforded *a very ample margin*, for then the flood water would practically have had double the area to spread over, and even had a flood taken place when both reservoirs were quite full, "which of course was a contingency that might occur," I am certain that no damage would have been done had everything else been sound; but even without the prior construction of the "Strynes Reservoir," I consider that the bye-wash was sufficient, for assuming, as stated on page 7 of Messrs. Rawlinson & Beardmore's Report, "that 30,000 cubic feet of water per minute might be flowing into the reservoir during an extreme flood," the present bye-wash with a depth of 18 inches on the sill, "and there is no reason why 24 inches should not be allowed to pass," would discharge 23,984 cube feet per minute, or say 24,000 cube feet in round numbers, and the pipes 5,000 cube feet per minute, so that I see no reason why I should not adhere to the opinion which I expressed before the coroner. As a general rule, the greater the surface or area of a reservoir, in proportion to the area of the catch-water basin, the less the bye-wash required.

It is certain, moreover, that the Bradfield Reservoir did not fail by reason of the bye-wash being too small, as the bank, or the strata beneath the bank, slipped and gave way before the capability of it (the bye-wash) was tested; and I repeat that I am of opinion that a depth of water of two feet might safely have been allowed to flow over the sill of the bye-wash.

The examination of the pipes since the burst has, however, I am informed, disclosed the fact that one of them was, to a great extent, choked up with mud, and wreck, and stones, and that therefore the capacity for lowering the water in the reservoir had been seriously diminished.

No. 5. Referring to paragraph No. 5 of the same Report (wherein I stated that the importance of carrying out the work in thin consecutive layers, and of finishing each layer before a second one was commenced, could not be over-estimated), I beg to state that I still entertain exactly the same opinions as I expressed in my letter to the Sheffield daily papers on the 12th of March (which appeared on the 14th) in my Report of 23d March, and in my evidence before the coroner. I consider that the bank should have been made in layers, not in tips; that these layers, on the inside slope, should certainly not have exceeded two feet in thickness, and would have been better six inches thick; that each layer should have been carried over and through, and perfectly finished, before a new layer was commenced; that the puddle should have been carried up contemporaneously, and that no railway waggons and rails should have been used *on the bank*. I am of opinion (as stated by me in my Report of 23d March, and in my evidence before the coroner), that the Bradfield embankment did not settle equally, and in fact I do not see how, with such material and with the mode of construction pursued, unequal settlement could be avoided.

No. 6.

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work if ever I did such a thing again, to lay the pipes in a tunnel through the solid; I would never lay the pipes through the bank again.

916. How then?—Suppose this (*sketch on black board*) to be the surface of the reservoir, the stream supplying the reservoir might have been contoured round the side, and brought to the bye-wash.

917. Mr. *Rawlinson.*] As it was when the reservoir was first started to be made?—(Mr. *Jackson.*) Yes, but I supposed at a higher level, and then you would have had control over the flood water.

918. The *Foreman.*] And thus you could have allowed just as much water as you pleased to flow into the reservoir, and all the rest to go away?—(Mr. *Jackson.*) Exactly; and then you could have eased the reservoir with pipes.

919. The *Coroner.*] And the ditchway, if so constructed, and at a proper level, would have had the effect of relieving it from the flood water?—(Mr. *Jackson.*) Yes.

920. Mr. *Rawlinson.*] I think Mr. Gunson will tell you that the entire river, and floods, and all, passed along an artificial course for a certain length of time, and that might have been continued so as to drain off flood waters in any case of apprehended danger; and then the two 18-inch pipes would have a much greater command on the volume of water within the reservoir; what length of time did you say the passage was used for the water?—(Mr. *Gunson.*) Up to about 18 months ago, till the bank was up. It was up all the time the reservoir was constructing.

921. A *Juror.*] Did you ever make a reservoir as deep as this?—(Mr. *Jackson.*) Never; I have made one holding more water, but not the same depth, and it is depth that gives the danger. There is more danger in half an acre of considerable depth than in one of a thousand acres, barring the effect the wind might have on the surface in creating the waves. Another means, suggested by Colonel Ford last night, I consider very good, and that is that the bye-wash should not be constructed on its ultimate level, but considerably below, until the reservoir has been permanently settled and consolidated. That suggestion is capable of being worked out very valuably, because you may construct the waste-water weir, say, 20 feet below the top of the bank, having a series of sluices in lifts, so that you could ease the bank amazingly; so, if you had four lift sluices one above the other, you would always maintain a passage of 20 feet from the top of the bank.

922. The *Coroner.*] Then you say another means suggested by Colonel Ford is that the bye-wash should be made below its ultimate level, that is below the level at which the water is intended ultimately to stand in the reservoir?—(Mr. *Jackson.*) Yes; that is until the bank is perfectly consolidated. The water might be raised to its ultimate level by constructing sluices across the waste-water channel.

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No. 6. Referring to paragraph No. 6 of the same Report (wherein I stated that a *too hasty filling of the reservoir was to be deprecated as being liable to induce hasty settlement, and that such hasty or unequal settlement was very likely to cause the bank to crack*), I beg to state that I still hold the same opinion, that I feel confident that the inside slope of the bank, or that next the water, *must have settled more rapidly than the outside slope*, and that there was a probability of, or tendency to, damage to the puddle wall in such hasty and unequal settlement.

No. 7. Referring to paragraph No. 7 of the same Report (wherein I stated that an insufficient guarding against uprising springs in the bottom, *a neglect to provide for the drainage of the site of the embankment under the outside slope*, not securing a good foundation for the puddle trench, and an undermining of the foundations of the puddle bank or wall, were all elements of danger, and that it was possible and probable that water had found its way through the fissures in the rock bottom in this case, and got under the puddle, and that such a leakage would be of itself sufficient to cause the outside slope of the bank to slip and the whole to give way, unless the seat of the outside slope of the embankment was properly prepared and drained; and referring also to my evidence before the coroner, Questions 882* to 906 inclusive, but more especially to Question 890), I beg to state that the

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* 882. The *Coroner.*] Have you examined the stratification of the rock?—(Mr. *Jackson.*) I have.

883. Have you anything to tell us on that?—Well, I have formed my opinion on that score; I have heard——

884. The *Coroner.*] Don't tell us what you have heard, but give us your own opinion?—(Mr. *Jackson.*) I have examined inside the reservoir and outside too, and I don't see any great objection to baring the rocks inside the reservoir, and taking the material for constructing the embankment from thence.

885. No objection?—No objection that would lead me to conclude that it was fatal to the bank; that is, provided that proper means were taken to drain away all water that might percolate under the outside slope of the bank.

886. Yes?—The question of baring the rocks on the inside of the reservoir is more a possible cause of waste of water to the company, to be weighed against a certain economy in the construction of the bank than anything else. No damage from such a cause would be occasioned to the embankment by any water passing under the fissure of the rocks in the inside of the reservoir without the water rising either immediately underneath the outside slope, or immediately adjacent thereto; and it by no means follows that it should do that; it may leak in the fissures, and appear half a mile off.

887. Mr. *Rawlinson.*] On the side of the bank, you mean?—(Mr. *Jackson.*) Yes, on the side of the bank, or immediately adjacent to the toe of the bank; under the seat of the outside slope, that is better, or immediately adjacent thereto. It by no means follows that because water entered the fissures of the rocks in the inside of the reservoir that it would re-appear under the seat of the embankment. It might appear half a mile down.

888. The *Coroner.*] Or it might appear under the seat of the embankment?—(Mr. *Jackson.*) Yes; but if it is properly drained I do not see any danger from that.

889. But it is not properly drained; there is no drainage at all, is there?—I don't think that is in evidence.

890. What is your opinion as to the cause of the breaking of this bank?—I have not the least doubt that the proximate cause was the drawing of the joints of one or more of the pipes, of the leakage along the outside of the pipes between the pipes and the puddle, or both causes combined. It is possible that there might have been a leakage through the fissures of the rock which appears under the outside slope, or immediately adjacent thereto in addition.

891. A *Juror.*] Respecting the sockets, do you believe that the pipes have been entirely drawn out of the sockets?—(Mr. *Jackson.*) That is impossible to say. I have known this; when a pipe has burst I have frequently, instead of getting the pipe out and inserting a new length, bared three lengths and sprung them out. By baring about three lengths of joints and burning out the joints, they will allow of being sprung in this way till they will draw out, so if they will allow of being sprung at the top they will allow of being sprung at the bottom.

892. A *Juror.*] If the valves had been put inside the dam instead of where they were, would it have made any difference on the pressure of water when the valves were raised, supposing the joints of the pipes were started, and not drawn out?—(Mr. *Jackson.*) There would be no difference in the pressure of water; but if they had been on the inside there would be no tendency to start the joints.

893. Suppose the valves were raised inside?—That would not tend to break or draw the joints, and there would be less pressure when the valves were open than when they were shut.

894. Do you think it would have been better for the pipes if the valves had been inside instead of where they were?—There cannot be a shadow of a doubt about that. If a joint be drawn, and the water finds its way to the back of the puddle, the embankment would be torn down, and the whole of the water in the reservoir set free before you could take any means to prevent it.

895. The *Coroner.*] You said something about the possibility of water in the fissures of the rocks rising up there?—(Mr. *Jackson.*) It is possible.

896. You say, I think, that the cause of the embankment falling was the breaking of one or more pipe-joints, or the leakage of pipe-joints, or both combined, and then you went on to tell us about the possibility of water coming through the fissures?—It is possible for a leakage through the fissures of the rocks to reappear directly under the seat of the outside slope of the embankment.

897. What would the effect of that be?—That would be cause of itself sufficient to burst the bank, without the water had free vent.

898. Can that free vent be obtained?—It can be obtained in one or two different ways.

899. The *Coroner.*] Just tell me them shortly, in one or two words?—(Mr. *Jackson.*) By having the seat of the embankment under the outside slope well and efficiently drained, by cutting trenches, and filling them with large stones, not square stones, but stones that will admit of a free passage for the water.

900. By a system of drainage, in fact?—Yes.

901. Any other mode?—There is the mode of guarding against water appearing in the puddle trench, and getting along the puddle itself. You can collect all the water in a longitudinal drain at the very botton of the puddle trench, so (*made a sketch on the black board, showing the drain at the bottom of the puddle trench*). I would carry the drain the whole length of the trench, if necessary, to the lowest point, then transversely, and up to the surface of the ground or the bottom of a drain under the seat of the outside slope. That is a perfectly safe way of getting rid of water, provided that the bottom of the puddle trench be of rock.

903. A *Juror.*] Is it possible that any quantity of water could have entered even this way to the seat of the embankment, without its being obvious to casual observers; could any quantity of water enter so as to get underneath the seat of the outer slope without its being obvious to any casual observer?—(Mr.

the evidence of Mr. Joseph Ibbotson, and of the two persons employed on the works, "taken in my presence since the inquest," induces me now to believe that there was a leakage under the puddle, which appeared and had vent in the loose strata under the outside slope of the bank, that the seat of the outside slope was not sufficiently prepared and drained, and that the water from the springs was not effectually combatted and got rid of.

Was there a spring in the bottom of the puddle trench or not when the puddling was commenced? If so, how was it dealt with? Was it led away, or plugged with wooden wedges, or merely smothered or attempted to be smothered with puddle? An endeavour to weight down or smother a spring in the bottom in such a manner, I look upon not only as futile, but as worse than useless. I should always plug leaky fissures in the sides, as by doing so the trench can be sunk for less cost, and should plug fissures in the bottom, or lead the water away.

One thing is perfectly certain, and that is, that the cause of the catastrophe was *water getting into and under the seat of the outside slope of the embankment, inducing a slip and settlement immediately before the burst. Whether such water found its way then through a defective joint in the pipes, or by a leakage along the exterior of the pipes between their outer surface and the puddle, or by a leakage under or through the puddle, or by any other means, no doubt water did get there*, and as there is no evidence that the seat of the bank was prepared and drained so as to give it free vent, I have not the least doubt that the stratification under the outside slope of the bank gave way, and that the bank followed as a matter of course.

It is clear to me now, as it was when I wrote my letter of March 12th, and my Report of March 23d, that there was a slip either of the bank itself or of the foundation on which the bank rested, for how else could the accident have occurred? And in either case there would be an inevitable settlement of the outside slope of the bank and of the middle portion.

It is to be noted that the giving way has only been a partial giving way, under the heaviest portion of the bank (in fact the two ends remained perfect); so also did the foot or lower portion of the inside slope and the masonry of the forebay; and it appears to me very improbable, after hearing the evidence of Mr. Gunson before the coroner (Questions 405 to 412* inclusive), that the bank itself failed first. This giving way would, however, be an effect, not a cause, and cannot properly be termed a landslip.

I am not, however, of opinion that this giving way was one which *could not have been foreseen, or anticipated, or guarded against*, as if you admit this you furnish at once an unanswerable argument for the immediate increase of the existing rates of all companies throughout the kingdom possessing similar works; for 5 or 6 per cent. is not sufficient to compensate shareholders or induce them to embark capital in the face of such a tremendous risk if *unavoidable*: but, on the contrary, I am of opinion that the site of the embankment was not judiciously chosen, as it appears to have been placed in the immediate neighbourhood of ancient landslips, of strong springs, and of suspicious indications of faults in the strata; and it does not appear to me, nor have we any evidence, that sufficient examination was made of the site previous to commencing the work. The construction of such an embankment anywhere on the Dale Dyke Valley must, in my opinion, be attended with a certain amount of risk; and it was therefore, in my opinion, absolutely necessary, before constructing a bank in such a suspicious locality, and indeed before constructing such a bank in any locality, that a complete geological section of site should be obtained, by instituting or causing a number of borings and trial holes to be made and taken in the direction of the length of the bank, and transversely at every chain or two chains, and that the investigation should extend for some distance on each side of the proposed

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Jackson.) It is possible, because it is possible that the very ground underneath the outside slope might be of such a nature as to swallow up the water, as it were, and not to allow it to appear.

904. Was it so in this case?—That I cannot tell without seeing it.

905. Mr. *Rawlinson.*] If that line of pipes laid through the puddle trench has been carried down by the superincumbent weight of the embankment compressed down, do you think that the puddle above would follow it in the same proportion as the compression, so as to preserve an absolutely tight coating around it, such as was originally made; is there any possibility, do you think, of a creep being caused?—(Mr. *Jackson.*) I do think so.

906. Mr. *Rawlinson.*] That the pipe might have been compressed, and that the upper puddle would not follow it so solidly as it was first laid?—(Mr. *Jackson.*) I think it is quite possible.

* 405. How then?—The principle adopted was this; in order to prevent slips we had something like 24,000 cube yards entirely of stone on the outward slope of the bank.

406. That was the first thing?—Yes, that was put at the outward slope of the embankment.

407. Yes?—For the information, perhaps, of the jury, I may state, if they could have seen it before the accident took place, the stone formed an embankment of itself up to within 50 feet of the top of the embankment, and it was something like 50 feet high across the valley.

408. And being the face of the embankment to that height?—Forming the face of the outer slope of the embankment to that height.

409. Is any part of that to be seen now?—Yes; the object of that, I may say, was to prevent slips taking place.

410. What sort of slips?—To prevent the embankment slipping on the surface that it was placed upon.

411. Yes?—And for the purpose of getting that done effectually we paid an additional price of 3*d.* per cubic yard for selecting this stone out for this purpose and placing it there.

412. And when you had done that, what did you do?—The next operation was all the entire stone being put on outside, so, as far as practicable, to put the next coarse material next to it, and reverse all the finer material next the puddle, forming a double puddle against the puddle wall.

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proposed site. Very much depends upon whether such a geological section was taken in this case or not, and it appears to me of the utmost importance to ascertain whether such a section was made. We have no evidence on this point, and it may ultimately appear that the very improbable but still possible contingency, that there was an upcast in the strata between the trial holes, "not sunk more than the usual distance apart," really existed, which was not shown or indicated by the borings taken or trial pits sunk (*see* Questions 925 and 855*). There have been, I think, errors in judgment and errors in construction, but other engineers may and do think differently, and there is no doubt that instances can be brought forward where reservoirs are now standing, "to all appearances perfectly secure," that have been constructed in a very similar manner to this. To me it appears that it would have been safer to have placed the embankment about 200 yards higher up the stream, as stated by me in the memoranda furnished to you by me on May 27th (and as pointed out by me previously on the ground), as it is more than probable that a better bottom would have been met with there, and that several thousand pounds would have been saved in the sinking of the puddle trench; but it is only fair to admit that had this been done it would have been necessary to have made a much higher bank to have obtained an equal amount of storage capacity.

I am of opinion, notwithstanding this, however, that a great mistake has been made in the choice of a site for the existing embankment; in placing it, in fact, where there was a predisposition to a slip, and in the insufficient preparing and draining of the site of the embankment, under the outside slope, all soft and compressible material ought to have been removed, which, so far as the evidence taken before the coroner extends, does not appear to have been done, and the danger from any soakage or leakage of water ought to have been guarded against by drains laid entirely under and clear of the outside slope. I am further of opinion that it would have been advisable for the engineer to have abandoned the second site, when he found in sinking the puddle trench that he had so much water to contend against, without he found he could plug the fissures or line the trench at a moderate cost. And I am induced to think, after hearing the additional evidence obtained since the inquest, and now in your possession, that a perfectly safe bottom was not arrived at for the puddle trench without providing some of the usual means for leading away the water that might arise in the bottom, or plugging up all the fissures in the rocks with wooden wedges before commencing to puddle.

I am of opinion, as stated by me before the coroner, that the baring of the rocks in the inside of the reservoir had nothing whatever to do with the disaster, as, whether they were bared or not, the water would have found its way to them. If six feet head of water will penetrate 12 inches of puddle, as stated in the Report of Messrs. Rawlinson & Beardmore, on page 9, doubtless the head in this reservoir, "90 feet," would have caused the water to penetrate the pervious covering of the rocks. The same argument applies against any recommendation to sheet-puddle the inside of a large storage reservoir, or to sheet-puddle the face of a bank. Any such practice I condemn unhesitatingly, as being a useless and wanton expenditure of capital when dealing with a reservoir as deep as the Dale Dyke Reservoir. I adhere to the opinion which I expressed in my Report of March 23d, and in my evidence before the coroner (*see* Questions 884 to 888 inclusive (p. 14), and Question 974†), and I think that it is a perfectly proper course to pursue, to take the material for the formation of an embankment from the inside of the reservoir.

No. 8. Referring to paragraph No. 8 of the same Report (in which I referred to the danger of laying cast iron pipes under or through an embankment, and referring also to my evidence before the coroner on this subject), I beg to state that I still hold the same opinions.

It is unnecessary for me to write at length on this subject, as I have enlarged upon it in the commencement of this Report, and I therefore content myself with saying that, even admitting, for the sake of argument, that it is a proper and wise thing to do, to lay pipes under or through a reservoir embankment, the valves on such pipes should be on the inner end, as otherwise, in the event of a pipe giving way, the water would escape into the embankment, and cause *it* also to give way before means could be taken to prevent it (at Melbourne I placed valves both on the inner and outer ends of the pipes); and I am also of opinion that the pipes should be large enough to admit a man for the purpose of effecting necessary repairs. I consider that the mode of laying the pipes at Bradfield was very objectionable, and that a deflection from a straight line and consequent springing of joints was

* 925. The *Foreman.*] Will you give us your reason for believing that the springs for the rock could not well-up under the puddle trench?—(Mr. *Jackson.*) Because I believe it was carried to an impervious strata; and, unless there was an upcast in the strata, it could not get up there, and it is very unlikely that there should be an upcast in that particular place.

855. And risen where?—And risen under the outside slope, including the settlement and slip immediately preceding the burst. I am inclined to think that such was not the case, and that the puddle trench was a good job; though, judging from the evidence of Mr. Leather and Mr. Gunson, I scarcely think it is satisfactory in what they say about the puddle trench being perfectly dry when they walked through it, because it depends entirely upon the season of the year when they walked through, whether it was wet or whether it was dry. There may be springs which are intermittent, but, on the whole, I am inclined to think the puddle trench was a good job, and that they had got down to an impervious strata.

† 974. There was a good deal said yesterday about the leakage at the bottom of the reservoir, in consequence of the rock being bared; what have you to say on that?—In my opinion the bank has not gone from that cause, and I should not hesitate to make a reservoir to-morrow, taking stuff from the inside in similar cases.

was almost inevitable. I have been told that the Bradfield pipes have been tested by hydraulic pressure, and found to be as perfect as they were on the day they were laid; but on the other hand I have been assured by an eye-witness that when the testers ceased pumping there were indications that a leakage existed, though not such a leakage as would have existed had a pipe been positively broken, or had the line of pipes become absolutely dislocated. I have also been told that the pipes have been examined in the inside by a man passing through, and that there were no signs of settlement, or of a joint being started; but on the other hand I have been assured that previous to the man entering the pipes, it was found necessary to mop out a quantity of water which stood in the centre of the line, showing that they had sunk; and I am certain that no man could make a satisfactory examination inside of a pipe 18 inches in diameter, and that it is impossible to ascertain from any interior examination whether a joint has started or not, and equally impossible to ascertain whether there has been a leakage along the exterior of the pipes or not. *It is certain that water got under the outside slope of the bank, which caused the slip. Query, how did it get there?*

The reservoir, "it is not to be forgotten," failed *the moment it became full.*—Query, was this the precise moment of a natural and *unavoidable* landslip occurring?

I am of opinion that Mr. Leather was singularly unfortunate in having inspected the bottom of the puddle trench (prior to commencing puddling) at a dry season of the year instead of a wet one. I have, since the date of the accident, carefully watched the varying flow of water from the springs in the inside of the reservoir, which have at this date almost ceased to run, I am consequently of opinion that these springs are, as supposed by me (*see* Questions 851 to 855* of evidence before the coroner), intermittent springs, and that Mr. Leather, or any other engineer who had not had opportunities of watching and noting the fluctuations in the discharge of water from them, might have easily been led into error at the time when the puddle trench was inspected by him, previous to commencing puddling, as there might be fissures which an inspection in wet weather would show required plugging, but which would escape notice in dry weather.

Before concluding, I would briefly refer to my previous communication to yourself (wherein I stated that I thought it was *possible* for the catastrophe to have been averted early on the evening of the 11th of March, by the cutting of a grip or narrow trench in the earthwork of the bank at its extremity, close to the bye-wash, and allowing the water to find a passage, as in this case a portion of the bank would have been gradually worn away, but no burst would have taken place, and little or no damage would have been done save to the bank itself.

It is right to observe that few persons would, under any circumstances, have liked to take the responsibility of such a course *individually and without consultation*, for had one single life been lost in consequence, no doubt a verdict of manslaughter would have been returned against the engineer. The *possibility* of killing one man by a *wilful* act is a very serious contingency, and it would be no excuse in such a case for the accused to say, if he had not killed one a thousand others would have lost their lives; and it was, moreover, too late when Mr. Gunson arrived on the works, on the night of the 11th of March, to have done anything with effect.

Lastly. In drawing up this report, which is necessarily not so comprehensive as I might have made it had I had access to the plans and specifications and other information exclusively possessed by the Water Company, and which cannot now be obtained through any other source, I have endeavoured throughout to look upon the case fairly, and to consider what may be adduced from both sides, being satisfied that until all parties have been fully heard no final and correct decision can be given. It is certain that water getting under the outside slope of the bank was the cause of the failure, either by inducing the bank itself, or the foundation on which the bank rested, to slip, and that this might have been prevented. In conclusion, I must record my opinion that there have been several serious errors in the construction of the Dale Dyke Reservoir.

I have, &c.

John Yeomans, Esq.,
Town Clerk of Sheffield.

(signed) *Matthew Bullock Jackson.*

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* 851. Now, then, we will come to the springs, if you please, the keeping out of the water; you heard yesterday the mode described for keeping down the water in the puddle trench?—I did.

852. And what have you say to that?—The evidence of Mr. Gunson, to a great extent, dispelled the doubt that I previously entertained.

853. What is that doubt?—The doubt was as to whether the water had got under the puddle trench, and risen immediately under the outside slope.

854. Under the puddle wall?—Well, under the puddle wall.

855. And risen where?—And risen under the outside slope, inducing the settlement and slip immediately preceding the burst. I am inclined to think that such was not the case, and that the puddle trench was a good job; though, judging from the evidence of Mr. Leather and Mr. Gunson, I scarcely think it is satisfactory in what they say about the puddle trench being perfectly dry when they walked through it; because it depends entirely upon the season of the year when they walked through, whether it was wet or whether it was dry. There may be springs which are intermittent, but, on the whole, I am inclined to think the puddle trench was a good job, and that they had got down to an impervious strata.

I N D E X.

[*N.B.*—In this Index the *Figures* following the Names of the Witnesses refer to the Questions in the Evidence; those following *App.*, to the Paging in the Appendix; and the *Numerals* following *Rep.*, to the Paging in the Report.]

A.

AGDEN RESERVOIR (*Sheffield Waterworks*). Imperfect mode of construction of the Agden Reservoir, the specification being the same as for the Bradfield Reservoir, *Leslie* 1478, 1479. 1531–1534.

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Bradfield Reservoir (Sheffield Waterworks):

1. *Site.*
2. *Mode of Construction, and Character of the Work.*
3. *Means of Discharging the Water.*
4. *Cause of the Accident.*
5. *Question of Government Inspection.*

1. *Site:*

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BRADFIELD RESERVOIR (SHEFFIELD WATERWORKS)—continued.

4. *Cause of the Accident*—continued.

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SPECIAL

REPORT

FROM THE

SELECT COMMITTEE

ON

WATERWORKS BILL;

TOGETHER WITH THE

PROCEEDINGS OF THE COMMITTEE,

MINUTES OF EVIDENCE,

APPENDIX, AND INDEX.

Ordered, by The House of Commons, *to be Printed,*
23 *June* 1865.

[*Price,* 1*s.* 6*d.*]

401.

Under 16 *oz.*

REPORT

FROM THE

SELECT COMMITTEE

ON THE

BANKRUPTCY ACT;

WITH THE

PROCEEDINGS OF THE COMMITTEE,

AND

AN APPENDIX.

Ordered, by The House of Commons, *to be Printed,*
21 *March* 1865.

Jovis, 9° die Februarii, 1865.

Ordered, THAT a Select Committee be appointed to inquire into the working of the New Bankruptcy Act, and to report thereon.

Ordered, THAT the Committee do consist of Sixteen Members.

Committee nominated of—

Mr. Attorney General.	The Lord Advocate.
Mr. Moffatt.	Mr. Lowe.
Mr. Murray.	Mr. Vance.
Mr. Malins.	Mr. Cave.
Mr. Weguelin.	Mr. Goschen.
Mr. Gathorne Hardy.	Mr. Roebuck.
Mr. Kirkman Hodgson.	Mr. Taverner John Miller.
Mr. Crum-Ewing.	Mr. Ayrton.

Ordered, THAT the Committee have power to send for Persons, Papers, and Records.

Ordered, THAT Five be the Quorum of the Committee.

Veneris, 24° die Februarii, 1865.

Ordered, THAT Mr. Kirkman Hodgson be discharged from further attendance on the Committee, and that Mr. Dunlop be added thereto.

Martis, 21° die Martii, 1865.

Ordered, THAT the Committee have power to report their Opinion to The House.

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REPORT.

THE SELECT COMMITTEE appointed to inquire into the Working of the Bankruptcy Act (1861), and to Report thereon;——Have considered the Matters to them referred, and have come to the following RESOLUTIONS, which they have agreed to Report to the House:

Resolved, That it is the opinion of this Committee—

Matters prior to Bankruptcy.

That imprisonment of debtors at the suit of the subject to compel the payment of money, under any judgment decree or order of any court, should be abolished. 1 & 2 Vict. c. 110, s. 3.

That a creditor under any judgment decree or order should have the same power of arresting the person of his debtor, who may be about to quit the kingdom, as a creditor now has before judgment, under the Act 1 & 2 Vict. c. 110; and the debtor should be detained in custody until he has either given security or paid the demand, or been discharged in due course of law.

That the power of an execution creditor to enforce the payment of a debt above 50 *l.* should be extended to any sum due under any judgment decree or order of a court of justice. 24 & 25 Vict. c. 134, s. 76 *et seq.*

Adjudication of Bankruptcy.

That adjudication of bankruptcy should be made by a Court in the metropolis, or by a County Court.

Proceedings on Adjudication.

That the office of official assignee should be abolished.

That on adjudication, the property of the bankrupt should remain in his charge in trust for his creditors, without power of alienation, until the appointment of a trustee, or other special order.

That the Court of Adjudication should be empowered to order such measures to be taken as may be necessary for the safe custody of the property, and the disposal of it between adjudication and the appointment of a trustee.

That any creditor should only be entitled to vote on proceedings in bankruptcy in respect of the balance due, after deducting the value of all securities for his claim, including Bills of Exchange, and other obligations, as provided in the Bankruptcy Act of Scotland.

Administration of Assets.

That the creditors should meet as soon as possible after adjudication, and those who have verified their claims should elect a trustee.

That they should, at the same time, elect two or more inspectors from their own body to superintend on their behalf, without remuneration, the proceedings of the trustee.

That the estate of the bankrupt should vest in the trustee on his appointment, and he should possess full power to collect and realize the estate and distribute it amongst the creditors.

That the trustee should be empowered to admit or reject the claims of any creditor, and any creditor should be at liberty to appeal to the Court of Adjudication against such decision.

That when an appeal from the rejection of the trustee shall not be made within a reasonable time, the creditor should be finally excluded from the dividend thereupon made, but without prejudice to a proper adjustment of his claim if afterwards admitted at any future dividend.

That the trustee should keep a proper record of the proceedings, and present accounts periodically to the inspectors, and afterwards to the accountant in Bankruptcy, showing the administration of the assets.

That the trustee should give security for the performance of his duty, and be paid a reasonable remuneration, to be fixed by the creditors.

That the Court of Adjudication should have power, on the application of a creditor or of the trustee, to make the orders necessary to compel a due compliance with the provisions of the Bankrupt Laws.

That the accountant in bankruptcy should be required to examine all such accounts as the trustee may be required by law to file, and to issue in each case such directions as may be necessary for the due accounting by the trustees. Such directions to be enforced by the Court of Adjudication.

Discharge of Bankrupt.

That whenever the bankrupt shall have made a full disclosure of his dealings and affairs, and a surrender of all his property to the satisfaction of the Court of Adjudication, and shall have paid a dividend of six shillings and eight pence in the pound to those creditors who have proved their debts under his bankruptcy, he should be freed from all claims capable of proof in the bankruptcy.

That in all other cases in which a bankrupt shall have made a full disclosure of his dealings and affairs, and a surrender of all his property to the satisfaction of the Court, he should be freed from all such claims after the expiration of six years from the date of the adjudication.

That the payment by the bankrupt, after the adjudication, to all his creditors who have proved under the bankruptcy, of such an amount as will, together with what is actually paid under the bankruptcy, make up the dividend required by the Eighteenth Resolution, should have the same effect as if the whole of such dividend had been paid under the bankruptcy.

Punishment of Bankrupt.

That such wilful acts of debtors tending to delay or injure their creditors as shall be declared by law criminal, should be made punishable only in the ordinary criminal courts of justice.

Administration under Deed.

That where a deed is to have the effect of binding creditors who have not executed it, the Court in which it is registered should have jurisdiction to determine whether it has been duly executed, or is, in other respects, valid.

That this jurisdiction should be exercised by the Court which would have exercised the jurisdiction in Bankruptcy, and every creditor should prove his debt, in respect of which the deed is signed, before such deed shall be deemed binding on any creditor who has not executed it.

That the amount of the debt to be proved should be ascertained in the manner provided in the Eighth Resolution.

That no deed of assignment should be binding upon any creditor who has not executed it, unless all the estate and effects of the assignor, which in case of bankruptcy would have vested in the trustee, shall have been thereby assigned for equal distribution among the creditors.

That no such deed of composition, assignment, or inspection, should discharge the debtor from debts due to creditors who do not execute it, unless all the creditors receive a dividend of at least 6 *s.* 8 *d.* in the pound, or else until six years shall have expired from the date of such deed.

Courts of Bankruptcy and Officers.

That there should be established a Court of Bankruptcy in the metropolis, and the judges of the Superior Courts of Equity and Common Law should sit as judges in that Court.

That there should be an appeal to the Court of Bankruptcy from all orders of a County Court, or of a single Judge in the Metropolis, relating to matters above the value of 20 *l.*, and from all other orders when the Court or Judge shall allow a special case for appeal.

That there should be a chief accountant, who should supervise the accounts of trustees, and perform such other duties as are provided for in the Bankruptcy Act of Scotland.

That the present Metropolitan and District Courts of Bankruptcy should be abolished as soon as practicable.

Consolidation.

That the Bankrupt Laws should be amended in the above particulars, and be consolidated.

21 March 1865.

PROCEEDINGS OF THE COMMITTEE.

Martis, 14° *die Februarii*, 1865.

MEMBERS PRESENT:

Mr. Murray.	Mr. Vance.
Mr. Miller.	Mr. Lowe.
Mr. Moffatt.	Mr. Cave.
Mr. Ayrton.	Mr. Goschen.
Mr. Weguelin.	

Mr. MOFFATT was called to the Chair.

The Committee deliberated.

Motion made, and Question proposed, "That further evidence be taken"—(Mr. *Goschen.*) —The Committee divided:

Ayes, 3.	Noes, 5.
Mr. Goschen.	Mr. Miller.
Mr. Murray.	Mr. Lowe.
Mr. Cave.	Mr. Vance.
	Mr. Weguelin.
	Mr. Ayrton.

[Adjourned till Tuesday next, at One o'clock.

Martis, 21° *die Februarii*, 1865.

MEMBERS PRESENT:

Mr. MOFFATT in the Chair.

Mr. Roebuck.	Mr. Lowe.
The Lord Advocate.	Mr. Crum-Ewing.
Mr. Ayrton.	Mr. Cave.
Mr. Miller.	Mr. Murray.
The Attorney General.	Mr. Goschen.
Mr. Vance.	Mr. Hardy.

Proposed Resolutions read as follow:—(The *Chairman.*)

"1. That the existing Courts of Bankruptcy, and the rules of practice under which they proceed, be abolished.

"2. That imprisonment for debt on final process be abolished.

"3. That, upon a declaration of insolvency by a debtor, or proof of insolvency before a court at the instance of a creditor, the assets held by the insolvent shall be promptly sequestrated and placed under care of a trustee, to be chosen and paid by the creditors; such trustee having power to admit debts to proof, to regulate priorities as between creditors, to collect the assets and declare dividends; and with the consent of two or more of the principal creditors, to bring actions against debtors to the estate, subject to appeal to a superior court as to the exercise of all these powers.

"4. That creditors who receive dividends shall give a release in full to the debtor; and creditors who decline to receive dividends shall retain the right to satisfy their debts out of the after-acquired property of the debtor.

"5. That

"5. That a judge in Bankruptcy be appointed, to exercise such appellate or other jurisdiction as may be required in the working of the system.

"6. That, in regard to deeds of composition, inspection and assignment, efficient means be adopted to ascertain the good faith and amount of the debt in respect of which each creditor claims to sign the deed.

"7. That, in the working of the proposed plan, the County Courts may be used to discharge duties analogous to those discharged by the Sheriff's Court in Scotland; and that matters not expressly included in these resolutions should be regulated, as far as possible, by analogy to the Scotch system of administration in Bankruptcy.

"8. That the punishment of fraudulent debtors be entrusted to the ordinary criminal tribunals of the country, by a law which shall enumerate and define offences, and award punishment for each."

The Committee deliberated.

[Adjourned till Tuesday next, at One o'clock.

Martis, 28° die Februarii, 1865.

MEMBERS PRESENT:

Mr. MOFFATT in the Chair.

Mr. Lowe.	The Attorney General.
Mr. Ayrton.	The Lord Advocate.
Mr. Hardy.	Mr. Weguelin.
Mr. Roebuck.	Mr. Miller.
Mr. Murray.	Mr. Vance.
Mr. Dunlop.	Mr. Cave.
Mr. Goschen.	

Proposed Resolutions read as follow:—(Mr. *Ayrton.*)

"MATTERS PRIOR TO BANKRUPTCY.

"1. Imprisonment of debtors at the suit of the subject to compel the payment of money should be abolished, except when there shall be probable cause for believing that the debtor is about to quit England.

"2. The power of an execution creditor to enforce the payment of a debt above 50 *l.* should be extended to any sum due under any judgment or order of a court of justice.

"ADJUDICATION OF BANKRUPTCY.

"3. Adjudication of bankruptcy should be made by a Court of Bankruptcy for the metropolitan district, and by a County Court for places beyond the metropolitan district.

"PROCEEDINGS ON ADJUDICATION.

"4. The office of official assignee should be abolished.

"5. On adjudication, the property of the bankrupt should remain in his charge in trust for his creditors, without power of alienation, until the appointment of a trustee.

"6. But the Court of Adjudication should be empowered to order such measures to be taken as may be necessary for the safe custody of the property, and the disposal of it between adjudication and the appointment of a trustee.

"7. Any creditor should only be entitled to vote on proceedings in bankruptcy in respect of the balance due, after deducting the value of all securities for his claim.

"ADMINISTRATION OF ASSETS.

"8. The creditors should meet as soon as possible after adjudication, and those having verified their claims should elect a trustee.

"9. They should, at the same time, elect two or more commissioners from their own body to superintend on their behalf, without remuneration, the proceedings of the trustee.

 "10. The

"10. The estate of the bankrupt should vest in the trustee on his appointment, and he should possess full power to collect in the estate and distribute it amongst the creditors.

"11. The trustee should be empowered to admit or reject the claims of creditors, and, on rejection, they should be at liberty to appeal to the Court of Adjudication; and

"12. When an appeal from the rejection of the trustee shall not be made within a reasonable time, the creditor should be finally excluded from any dividend thereupon made.

"13. The trustee should present accounts periodically to the commissioners, and afterwards to the accountant of the Bankrupt Court, showing the administration of the assets.

"14. The trustee should give security for the performance of his duty, and be paid a reasonable remuneration, to be fixed by the commissioners.

"15. The Court of Adjudication should have power, on the application of a creditor or of the trustee, to make whatever order may be necessary to compel a due compliance with the Bankrupt Laws.

"16. The accountants should be required to examine all such accounts as the trustee may have to file, and should issue such directions as may be necessary for the due accounting of the trustees. Such directions should be enforced by the Court of Adjudication.

"Discharge of Bankrupt.

"17. Whenever the bankrupt shall have made a full disclosure of his dealings and affairs, and a surrender of all his property to the satisfaction of the Court of Adjudication, he should be freed from all claims capable of proof in the bankruptcy.

"18. Except when it shall appear by the admission of the bankrupt, or by his conviction by a Criminal Court, that he has committed any penal act to the prejudice of his creditors, upon which the Court of Adjudication may order that his future acquired property and income shall be liable for the payment of his debts proved in the bankruptcy.

"19. No person should be entitled to his discharge who has not resided in England for one year immediately preceding his adjudication.

"20. No person should be entitled to prosecute an adjudication in bankruptcy, or proceed thereon without the Court fees being paid.

"Punishment of Bankrupt.

"21. Whatever wilful acts of debtors tending to delay or injure their creditors are deemed criminal, should be distinctly specified and made punishable in the ordinary criminal courts of justice.

"22. The assets of a bankrupt should not be applied in payment of the costs of prosecuting him in a criminal court.

"Administration under Deed.

"23. Where a deed is to have the effect of binding creditors who have not executed it, the Court in which it is registered should have exclusive jurisdiction to determine, summarily, whether it has been duly executed, or is, in other respects, valid.

"24. The deed should not be deemed invalid if it does not provide for the distribution of the assets rateably amongst the creditors without undue preference, but the Court, at the instance of any creditor who has not executed the deed, should be empowered to reform it, so as to provide for such distribution.

"Courts of Bankruptcy and Officers.

"25. There should be established a Court of Bankruptcy in the metropolis, with a single judge having the power and position of one of the judges of the Superior Courts.

"26. The judges of the Superior Courts of Equity and Common Law should be empowered to sit as judges in the Court of Bankruptcy.

"27. The Court, with the sanction of the Lord Chancellor, should empower a Registrar of the Court to perform such of its functions as may be expedient.

"28. There should be an appeal to the Court of Bankruptcy from all orders of the County Courts relating to matters above the value of 20 *l.*, and from all other orders when the County Court shall allow a special case for appeal.

"29. There should be a chief accountant in bankruptcy attached to the Court.

"30. There should also be as many distinct accountants in bankruptcy as may be deemed necessary, who should also be officers of the Court.

"31. The

"31. The chief accountant should supervise the accounts of trustees in the metropolitan district, and the district accountants should supervise the accounts of trustees within their respective districts.

"32. The present Metropolitan and District Courts of Bankruptcy should be abolished. The officers of those Courts should be appointed to such of the new offices as they may be fit to hold, and the others should be appointed to any suitable offices as opportunity offers.

"CONSOLIDATION.

"33. The principles of the Bankrupt Law should be as uniform as possible throughou the United Kingdom.

"34. The Bankrupt Laws should be amended in the above particulars, and be consolidated."

Motion made, and Question,—"That the Resolutions to be proposed by Mr. Ayrton be now considered"—(Mr. *Ayrton*).—Put, and *agreed to.*

1. Motion made, and Question,—"That imprisonment of debtors at the suit of the subject to compel the payment of money under any judgment decree or order of any court of justice should be abolished."—Put, and *agreed to.*

2. Motion made, and Question,—"That the power of an execution creditor to enforce the payment of a debt above 50 *l.* should be extended to any sum due under any judgment decree or order of a court of justice."—Put, and *agreed to.*

3. Motion made, and Question,—"That adjudication of bankruptcy should be made by a Court in the metropolis, or by a County Court."—Put, and *agreed to.*

4. Motion made, and Question,—"That the office of official assignee should be abolished."—Put, and *agreed to.*

5. Motion made, and Question,—"That, on adjudication, the property of the bankrupt should remain in his charge in trust for his creditors, without power of alienation, until the appointment of a trustee, or other special order."—Put, and *agreed to.*

6. Motion made, and Question,—"That the Court of Adjudication should be empowered to order such measures to be taken as may be necessary for the safe custody of the property, and the disposal of it between adjudication and the appointment of a trustee."—Put, and *agreed to.*

7. Motion made, and Question,—"That any creditor should only be entitled to vote on proceedings in bankruptcy in respect of the balance due, after deducting the value of all securities for his claim, including Bills of Exchange and other obligations, as provided in the Bankruptcy Law of Scotland."—Put, and *agreed to.*

8. Motion made, and Question,—"That the creditors should meet as soon as possible after adjudication, and those who have verified their claims should elect a trustee."—Put, and *agreed to.*

9. Motion made, and Question,—"That they should, at the same time, elect two or more inspectors from their own body to superintend on their behalf, without remuneration, the proceedings of the trustee."—Put, and *agreed to.*

10. Motion made, and Question,—"That the estate of the bankrupt should vest in the trustee on his appointment, and he should possess full power to collect and realise in the estate and distribute it amongst the creditors."—Put, and *agreed to.*

11. Motion made, and Question,—"That the trustee should be empowered to admit or reject the claims of any creditor, and any creditor should be at liberty to appeal to the Court of Adjudication against such decision."—Put, and *agreed to.*

12. Motion made, and Question,—"That when an appeal from the rejection of the trustee shall not be made within a reasonable time, the creditor should be finally excluded from the dividend thereupon made, but without prejudice to a proper adjustment of his claim at any future dividend."—Put, and *agreed to.*

13. Motion made, and Question,—"That the trustee should keep a proper record of the proceedings, and present accounts periodically to the inspectors, and afterwards to the accountant in Bankruptcy, showing the administration of the assets."—Put, and *agreed to.*

[Adjourned till Tuesday next, One o'clock.

Martis, 7° die Martii, 1865.

MEMBERS PRESENT:

Mr. MOFFATT in the Chair.

Mr. Hardy.	Mr. Lowe.
Mr. Roebuck.	Mr. Weguelin.
Mr. Murray.	Mr. Crum-Ewing.
Mr. Ayrton.	The Lord Advocate.
Mr. Vance.	Mr. Goschen
Mr. Cave.	Mr. Dunlop.

14. Motion made, and Question,—"That the trustee should give security for the performance of his duty, and be paid a reasonable remuneration, to be fixed by the Commissioners."—Put, and *agreed to.*

15. Motion made, and Question,—"That the Court of Adjudication should have power, on the application of a creditor, or of the trustee, to make the orders necessary to compel a due compliance with the provisions of the Bankrupt Laws."—Put, and *agreed to.*

16. Motion made, and Question,—"That the accountant in Bankruptcy should be required to examine all such accounts as the trustee is required by law to file, and should issue such directions as may be necessary for the due accounting of the trustees. Such directions should be enforced by the Court of Adjudication."—Put, and *agreed to.*

17. Motion made, and Question proposed,—"That whenever the bankrupt shall have made a full disclosure of his dealings and affairs, and a surrender of all his property to the satisfaction of the Court of Adjudication, he should be freed from all claims capable of proof in the Bankruptcy."—Amendment proposed, after the word "Adjudication," to insert the words, "and shall have paid a dividend of ——— to the creditors who have proved their debts under his Bankruptcy"—(Mr. *Attorney General*).—Question put, "That those words be there inserted."—The Committee divided:

Ayes, 10.	Noes, 4.
Mr. Hardy.	Mr. Dunlop.
Mr. Crum-Ewing.	Mr. Roebuck.
Mr. Murray.	Mr. Goschen.
The Lord Advocate.	Mr. Miller.
Mr. Lowe.	
Mr. Ayrton.	
The Attorney General.	
Mr. Weguelin.	
Mr. Vance.	
Mr. Cave.	

Question,—"That the blank be filled up with the words 6 *s.* 8 *d.*"—Put, and *agreed to.*

Main Question, as amended, put and *agreed to.*

Motion made, and Question,—"That, in all other cases in which a bankrupt shall have made a full disclosure of his dealings and affairs, and a surrender of all his property to the satisfaction of the Court, he shall be freed from all such claims after the expiration of ——— years from the date of the adjudication"—(Mr. *Attorney General*).—Put, and *agreed to.*

Question put,—"That the blank be filled up with the word "three"—(Mr. *Roebuck*).—The Committee divided:

Ayes, 6.	Noes, 7.
Mr. Roebuck.	Mr. Murray.
Mr. Hardy.	The Lord Advocate.
Mr. Goschen.	Mr. Lowe.
Mr. Miller.	Mr. Ayrton.
Mr. Crum-Ewing.	Mr. Attorney General.
Mr. Cave.	Mr. Weguelin.
	Mr. Vance.

Question,—"That the blank be filled up with the word 'six'"—(Mr. *Attorney General*).—Put, and *agreed to.*

Main Question, as amended, put, and *agreed to.*

Motion made, and Question,—"That the payment by the bankrupt, after the adjudication, to all his creditors who have proved under the bankruptcy, of such an amount as will, together with what is actually paid under the bankruptcy, make up the dividend required by the 17th Resolution, should have the same effect as if the whole of such dividend had been paid under the bankruptcy"—(Mr. *Attorney General*).—Put, and *agreed to*.

Motion made, and Question proposed,—"That the property of the bankrupt acquired after the adjudication shall not vest in the trustee, but shall belong to the bankrupt himself, subject to the ordinary operation of law" (Mr. *Attorney General*).—Amendment proposed, to leave out from the word "but" to the end of the Question, in order to add the words "may only be taken possession of by the trustee, with the sanction of the Court of Adjudication, on sufficient cause being shown to the satisfaction of the Court," instead thereof—(Mr. *Ayrton*).—Question put, "That the words proposed to be left out stand part of the Question."—The Committee divided:

Ayes, 5.	Noes, 8.
Mr. Murray.	Mr. Hardy.
The Lord Advocate.	Mr. Roebuck.
Mr. Lowe.	Mr. Ayrton.
Mr. Attorney General.	Mr. Goschen.
Mr. Vance.	Mr. Miller.
	Mr. Weguelin.
	Mr. Cave.
	Mr. Crum-Ewing.

Question put,—"That those words be there inserted."—The Committee divided:

Ayes, 2.	Noes, 11.
Mr. Ayrton.	Mr. Hardy.
Mr. Goschen.	Mr. Roebuck.
	Mr. Murray.
	The Lord Advocate.
	Mr. Lowe.
	The Attorney General.
	Mr. Miller.
	Mr. Weguelin.
	Mr. Vance.
	Mr. Cave.
	Mr. Crum-Ewing.

Question again proposed,—"That the property of the bankrupt acquired after the adjudication shall not vest in the trustee, but"—The Committee deliberated.

[Adjourned till Tuesday next, at One o'clock.

Martis, 14° *die Martii*, 1865.

MEMBERS PRESENT:

Mr. MOFFATT in the Chair.

Mr. Hardy.	Mr. Vance.
Mr. Crum-Ewing.	Mr. Cave.
Mr. Roebuck.	Mr. Dunlop.
Mr. Murray.	The Lord Advocate.
Mr. Lowe.	Mr. Goschen.
Mr. Ayrton.	Mr. Weguelin.
Mr. Miller.	

The Committee deliberated.

[Adjourned till Friday next, at One o'clock.

Veneris, 17° *die Martii*, 1865.

MEMBERS PRESENT:

Mr. MOFFATT in the Chair.

Mr. Dunlop.	Mr. Vance.
Mr. Crum-Ewing.	The Lord Advocate.
Mr. Roebuck.	Mr. Murray.
Mr. Hardy.	Mr. Cave.
Mr. Lowe.	Mr. Weguelin.
Mr. Ayrton.	Mr. Goschen.
Mr. Miller.	

Question,—" That the property of the bankrupt acquired after adjudication shall not vest in the trustee, but"—put, and *negatived.*

18. Motion made, and Question proposed,—" That, except when it shall appear by the admission of the bankrupt, or by his conviction by a criminal court, that he has committed any penal act to the prejudice of his creditors, upon which the court of adjudication may order that his future acquired property and income shall be liable for the payment of his debts proved in the bankruptcy."—Motion, by leave, *withdrawn.*

19. Motion made, and Question proposed,—" That no person should be entitled to his discharge who has not resided in England for one year immediately preceding his adjudication."—Motion, by leave, *withdrawn.*

20. Motion made, and Question proposed,—" That no person should be entitled to prosecute an adjudication in bankruptcy, or proceed thereon without the Court fees being paid."—Motion, by leave, *withdrawn.*

21. Motion made, and Question,—" That such wilful acts of debtors tending to delay or injure their creditors as shall be declared by law criminal, should be made punishable only in the ordinary criminal courts of justice."—Put, and *agreed to.*

22. Motion made, and Question proposed,—" That the assets of a bankrupt should not be applied in payment of the costs of prosecuting him in a criminal court."—Motion, by leave, *withdrawn.*

Motion made, and Question proposed,—" That all deeds of inspection, assignment, and composition, should be matter of mutual voluntary arrangement between debtors and creditors"—(Mr. *Moffatt*).—Question put.—The Committee divided:

Ayes, 2.	Noes, 10.
Mr. Miller.	Mr. Murray.
Mr. Vance.	Mr. Crum-Ewing.
	Mr. Roebuck.
	Mr. Hardy.
	The Lord Advocate.
	Mr. Lowe.
	Mr. Ayrton.
	Mr. Weguelin.
	Mr. Goschen.
	Mr. Cave.

The Committee deliberated.

[Committee adjourned till Tuesday next, at One o'clock.

Martis, 21° *die Martii*, 1865.

MEMBERS PRESENT:

Mr. MOFFATT in the Chair.

Mr. Dunlop.	Mr. Vance.
Mr. Hardy.	Mr. Weguelin.
Mr. Roebuck.	The Attorney General.
Mr. Crum-Ewing.	Mr. Cave.
Mr. Murray.	The Lord Advocate.
Mr. Lowe.	Mr. Goschen.
Mr. Ayrton.	

Motion made, and Question proposed,—"That where a deed of assignment, inspection, or composition is to have the effect of binding creditors who have not executed it, no creditor should be entitled to vote for, or to sign such deed, until the verity of his debt has been proved, and the value of all securities for his claim, including bills of exchange and other obligations, previously deducted therefrom"—(Mr. *Moffatt*).—Motion, by leave, *withdrawn*.

Motion made, and Question proposed,—"That deeds of assignment, inspection, or composition should not be binding upon dissentient creditors unless signed by a majority of six-sevenths in number and amount"—(Mr. *Moffatt*).—Motion, by leave, *withdrawn*.

Motion made, and Question proposed,—"That provisions should be made similar to those of the Bankruptcy Act of 1849, for guarding the rights and property of creditors under deed"—(Mr. *Moffatt*).—Motion, by leave, *withdrawn*.

23. Motion made, and Question,—"That where a deed is to have the effect of binding creditors who have not executed it, the Court in which it is registered should have jurisdiction to determine whether it has been duly executed, or is, in other respects, valid."—Put, and *agreed to*.

Motion made, and Question,—"That this jurisdiction should be exercised by the Court, which would have exercised the jurisdiction in Bankruptcy, and every creditor should prove his debt in respect of which the deed is signed before such deed shall be deemed binding on any creditor who has not executed it"—(Mr. *Ayrton*).—Put, and *agreed to*.

Motion made, and Question,—"That the amount of the debt to be proved shall be ascertained in the manner provided in Resolution number eight"—(Mr. *Ayrton*).—Put, and *agreed to*.

24. Motion made, and Question proposed,—"That the deed should not be deemed invalid if it does not provide for the distribution of the assets rateably amongst the creditors without undue preference, but the Court, at the instance of any creditor who has not executed the deed, should be empowered to reform it, so as to provide for such distribution."—Motion, by leave, *withdrawn*.

Motion made, and Question,—"That no deed of assignment should be binding upon any creditor who has not executed it, unless all the estate and effects of the assignor, which in case of Bankruptcy would have vested in the trustee, shall have been thereby assigned for equal distribution among the creditors"—(Mr. *Attorney General*).—Put, and *agreed to*.

Motion made, and Question,—"That no deed of composition, assignment, of inspection shall discharge the debtor from debts due to creditors who do not execute it, unless all the creditors receive a dividend of at least 6 *s*. 8 *d*. in the pound, or else until six years shall have expired from the date of such deed"—(Mr. *Lowe*).—Put, and *agreed to*.

25. Motion made, and Question proposed,—"That there should be established a Court of Bankruptcy in the Metropolis, with a single judge, having the power and position of one of the judges of the Superior Courts, and the judges of the Superior Courts of Equity and Common Law"—(Mr. *Ayrton*).—Amendment proposed to leave out from the word "That" to the end of the Question, in order to add the words "complete jurisdiction in Bankruptcy should be conferred on the Superior Courts of Equity and Common Law, and power given to those Courts to make arrangements for conveniently carrying out such jurisdiction"—(Mr. *Hardy*)—instead thereof.—Question proposed,—"That the words proposed to be left out stand part of the Question."—Amendment, by leave, *withdrawn*.

Question again proposed.—Amendment proposed, to leave out from the word "Metropolis" to the end of the Question, in order to add the words, "and the judges of the Superior Courts of Equity and Common Law should sit as judges in that Court"—(Mr. *Hardy*).

Question,—"That the words proposed to be left out stand part of the Question," put, and *negatived*.

Question,—"That those words be there added," put, and *agreed to*.—Main Question, as amended, *agreed to*.

26. Motion made, and Question proposed,—"The judges of the Superior Courts of Equity and Common Law should be empowered to sit as judges in the Court of Bankruptcy."—Motion, by leave, *withdrawn*.

27. Motion made, and Question proposed,—"That the Court, with the sanction of the Lord Chancellor, should empower a Registrar of the Court to perform such of its functions as may be expedient."—Motion, by leave, *withdrawn*.

28. Motion made, and Question,—"That there should be an appeal to the Court of Bankruptcy from all orders of a County Court, or of a single judge in the Metropolis, relating to matters above the value of 20 *l*., and from all other orders when the Court or judge shall allow a special case for appeal."—Put, and *agreed to*.

29. Motion made, and Question proposed,—"That there should be a chief accountant in bankruptcy attached to the Court."—Motion, by leave, *withdrawn*.

30. Motion made, and Question proposed,—"That there should also be as many district accountants in bankruptcy as may be deemed necessary, who should also be officers of the Court."—Motion, by leave, *withdrawn*.

31. Motion made, and Question proposed,—"That the chief accountant should supervise the accounts of trustees in the metropolitan district, and the district accountants should supervise the accounts of trustees within their respective districts."—Motion, by leave, *withdrawn*.

Motion made, and Question,—"That there should be a chief accountant who should supervise the accounts of trustees, and perform such other duties as are provided for in the Bankrupt Act of Scotland"—(Mr. *Ayrton*).—Put, and *agreed to*.

32. Motion made, and Question,—"That the present Metropolitan and District Courts of Bankruptcy should be abolished as soon as practicable."—Put, and *agreed to*.

33. Motion made, and Question proposed,—"That the principles of the Bankrupt Law should be as uniform as possible throughout the United Kingdom."—Motion, by leave, *withdrawn*.

34. Motion made, and Question,—"That the Bankrupt Laws should be amended in the above particulars, and be consolidated."—Put, and *agreed to*.

1 *a*. Motion made, and Question,—"A creditor under any judgment decree or order should have the same power of arresting the person of his debtor, who may be about to quit the kingdom, as a creditor now has before judgment, under the Act 1 & 2 Vict. c. 110; and the debtor should be detained in custody until he has either given security or paid the demand, or been discharged in due course of law"—(Mr. *Ayrton*).—Put, and *agreed to*.

Question,—"That the foregoing Resolutions be reported to the House"—(*Chairman*).—Put, and *agreed to*.

Ordered to Report.

APPENDIX.

Appendix.

RETURN of the DEEDS Registered in the COURT of BANKRUPTCY and in the OFFICE of the CHIEF REGISTRAR during the Months of November and December 1864; showing the Amount of Stamp and Ad-valorem Duty paid thereon; the Amount of Property or Composition comprised therein or distributable thereunder, and the Amount of Unsecured Debts above 10 *l.* comprised therein.

——	Number of Deeds.	STAMP DUTY.	£. s. d.	Amount of Estate and Effects comprised in or Distributable under.	Amount of Unsecured Debts under £. 10.
			£. s. d.	£.	£. s. d.
Nov. 1864 -	455	Ad-valorem - -	2,619 5 –	1,047,700	3,938,125 – 6
		10 *s.* Registration Stmps.	227 10 –		
		1 *s.* Search Stamps -	15 15 –		
			£. 2,862 10 –		
Dec. 1864 -	518	Ad-valorem - -	3,116 10 –	1,246,600	4,049,249 11 2
		10 *s.* Registration Stamps.	259 – –		
		1 *s.* Search Stamps -	16 16 –		
			£. 3,392 6 –		

NOTE BY THE CHAIRMAN.

The "Amount of Estate and Effects" exhibits merely the proposed amount of composition, and the debtor's estimate of the value of the assets, upon which assignments are accepted by creditors.

REPORT

FROM THE

SELECT COMMITTEE

ON THE

BANKRUPTCY ACT;

WITH THE

PROCEEDINGS OF THE COMMITTEE,

AND

AN APPENDIX.

Ordered, by The House of Commons, *to be Printed,*
21 *March* 1865.

144.

Under 2 oz.

REPORT

FROM THE

SELECT COMMITTEE

ON

MINES;

WITH THE

PROCEEDINGS OF THE COMMITTEE.

Ordered, by The House of Commons, *to be Printed*,
22 *June* 1865.

Martis, 9° *die Maii*, 1865

Ordered, That a Select Committee be appointed to inquire into the operation of the Act for the regulation and inspection of Mines, and into the complaints contained in Petitions from Miners in Great Britain with reference thereto, which have been presented to the House during the present Session.

Lunæ, 29° *die Maii*, 1865.

Committee nominated of,—

Mr. Ayrton.	Mr. Jackson.
Mr Liddell.	Colonel Dunne.
Mr. Neate.	Mr. Clive.
Mr. Greenall.	Mr. Ferrand.
Mr. Lawson.	Mr. Hussey Vivian.
Mr. Arthur Mills.	Lord Robert Cecil.
Mr. Kinnaird.	Mr. Bruce.
Mr. Francis Sharp Powell.	

Ordered, THAT the Committee have power to send for Persons, Papers, and Records.

Ordered, THAT Five be the Quorum of the Committee.

Jovis, 22° *die Junii*, 1865.

Ordered, THAT the Committee have power to report their Observations to The House.

REPORT - - - - - - - - - - - - - p. iii
PROCEEDINGS OF THE COMMITTEE - - - - - p. iv

REPORT.

THE SELECT COMMITTEE appointed to inquire into the Regulation and Inspection of MINES, and into the COMPLAINTS contained in PETITIONS from MINERS in *Great Britain* with reference thereto, which have been presented to the House during the present Session;——HAVE considered the matters to them referred, and have agreed to the following REPORT:—

YOUR COMMITTEE, on proceeding with the inquiry, found that it would be impracticable to complete it in the present Session; and being of opinion that it would be inexpedient to publish any Evidence they might receive without affording those affected by it an opportunity of being examined, your Committee determined to suspend their proceedings, and to recommend the appointment of a Committee at the beginning of the next Session of Parliament to resume the inquiry into the matters referred to them.

22 *June* 1865.

PROCEEDINGS OF THE COMMITTEE.

Veneris, 2° *die Junii*, 1865.

MEMBERS PRESENT:

Lord R. Cecil.	Mr. Bruce.
Mr. Jackson.	Mr. Kinnaird.
Mr. Powell.	

Mr. KINNAIRD called to the Chair, provisionally.

Mr. AYRTON to be the permanent Chairman.

Committee deliberated.

[Adjourned till Monday, 12th June, at One o'clock.

Lunæ, 12° *die Junii*, 1865.

MEMBERS PRESENT:

Mr. AYRTON in the Chair.

Mr. Liddell.	Mr. Bruce.
Mr. Greenall.	Mr. Kinnaird.

[The Committee adjourned to Wednesday next, at One o'clock.

Mercurii, 14° *die Junii*, 1865.

MEMBERS PRESENT:

Mr. AYRTON in the Chair.

Mr. Greenall.	Mr. Neate.
Mr. H. Vivian.	Mr. Clive.
Mr. Bruce.	Mr. Kinnaird.
Colonel Dunne.	Mr. Liddell.

Mr. *Thomas Burt* examined.

[Adjourned till Thursday, 22d June, at Half-past Three o'clock.

Jovis, 22° die Junii, 1865.

Mr. AYRTON in the Chair.

Mr. Liddell.	Mr. Mills.
Colonel Dunne.	Mr. Kinnaird.

Draft Report proposed by the Chairman, read 1° and 2°, as follows:

"Your Committee, on proceeding with the inquiry, found that it would be impracticable to complete it in the present Session; and being of opinion that it would be inexpedient to publish any Evidence they might receive without affording those affected by it an opportunity of being examined, Your Committee determined to suspend their proceedings, and to recommend the appointment of a Committee at the beginning of the next Session of Parliament to resume the inquiry into the matters referred to them."

Question, "That this Report be the Report of the Committee to the House,"—put, and *agreed to.*

Ordered, to Report.

REPORT

FROM THE

SELECT COMMITTEE

ON

MINES;

WITH THE

PROCEEDINGS OF THE COMMITTEE.

Ordered, by The House of Commons, *to be Printed,*
22 *June* 1865.

398.

Under 1 *oz.*

REPORT

FROM THE

SELECT COMMITTEE

ON THE

THAMES RIVER;

TOGETHER WITH THE

PROCEEDINGS OF THE COMMITTEE,

MINUTES OF EVIDENCE,

APPENDIX AND INDEX.

Ordered, by The House of Commons, *to be Printed,*
22 *June* 1865.

Staines to Cricklade, the Mayors and Recorders of Oxford, Abingdon, Wallingford, Reading, Henley, Maidenhead, and Windsor, the senior Bridge-Warden of Great Marlow, and the Clerk of Her Majesty's Board of Works residing at Windsor Castle for the time being.

The river is practically managed by a committee of 15 Commissioners, chosen from five districts into which the navigation is divided, three from each, but the proceedings of that committee are controlled by general meetings of the Commissioners.

Graham, 25. The Commissioners are not a corporation, which is embarrassing both to themGraham, 24. selves and to the public, for, as appeared from an opinion of counsel laid before your Committee, individual members of the Board of Commissioners may be held Graham, 83. personally liable for their acts, whilst the public may be subject to great difficulties in enforcing claims against the trust.

Graham, 23. Indeed, it was proved that creditors are afraid to encounter those difficulties.

The constitution of the Commission is unlike the constitution of any modern Castle, 352. trust of a like nature, and is obviously objectionable.

The powers of the Commissioners are very restricted and exclusively confined to the maintenance of the water of the navigation; and in the exercise of those powers they are greatly embarrassed by mill and lock owners upon the river, and by persons who claim rights of fishing, all of whom claim power to draw off and exercise a control over the water of the navigation, and often use that power to the great prejudice and inconvenience of the traffic.

Graham, 41, 42, 44. Another serious impediment to the proper development of the traffic of the navigation is the power vested in the owners of about 20 old locks and weirs, to levy tolls, independently of and without concert with the Commissioners, on vessels passing up and down the river, but in respect of portions of the river no longer forming part of the navigation. This right was reserved to them by the original Act constituting the Thames Navigation Commission, of which the main object was to provide for the erection of new locks called pound locks, that is, locks with double gates, through which the navigation was thenceforth to pass, which Act gave to the owners of the old locks the right of receiving the same tolls as they had been receiving heretofore, and left them in possession of any mill rights that were then existing.

Graham, 50. There is no power to compel the old lock owners to reduce their tolls, and the Commissioners have failed to convince them, as a body, of the advantages which 47. would result from offering the public fixed through rates and other facilities. The lock owners render no service for the tolls taken by them.

The value of the privileges of these lock owners depends on the amount of traffic, and if that traffic should continue to decrease, as it has lately been doing, those privileges will soon become valueless.

2. *As to the Financial Position of the Commissioners.*

They were authorised to borrow the following sums of money:—

	£.
By the 11 Geo. 3, c. 45	50,000
„ 28 Geo. 3, c. 51	25,000
„ 52 Geo. 3, c. 47	25,000
TOTAL £.	100,000

Graham, 9.

The amount actually raised was	95,000
Of this sum there has been repaid	6,600
Which leaves a total debt of £.	88,400

9, 13. The above debt is owing to about 112 persons, and the only security is upon the tolls and property of the Commissioners.

The

The greater part (60,500 *l.*) of the money was borrowed at 5 *l.* per cent. interest, and the remainder at 4½ per cent. 17.

In consequence of the great falling off of the traffic in 1851, the Commissioners were unable to pay the bondholders more than 4 per cent. 20.

The rate of interest was in the same manner further reduced in - - - - - 1852 to 3 per cent.
„ „ „ 1853 „ 2 „
„ „ „ 1857 „ 1 „
„ „ „ 1862-3 „ 10 *s.* „

and since then no interest has been paid.

The salaries of all the officers have been reduced, and at Christmas, 1864, the workmen were discharged. Graham, 33, 178.

The establishment of railways seems to have diverted a great part of the traffic from the navigation, and since 1845 there has been an annual falling off in the receipt of tolls. 134.

In 1845, they amounted to - - - -	£. 14,011. 13. 2.
In 1864 „ „ - - - -	3,097. 6. 8.

The total income of the Commissioners for the past year (1864) was 3,173 *l.*, and their expenditure, 3,209 *l.*; so that there was an excess of expenditure over income of 36 *l.*; and unless the requisite funds are provided to improve the navigation, and the traffic is encouraged by low uniform tolls and otherwise, the income must continue to decrease, and this important navigation be shortly closed to traffic.

The trust is, in fact, in an insolvent state, and many of the creditors have offered to take 2 *s.* in the pound for their claims. 75.

Attempts have been made to effect an arrangement with the bondholders for raising further monies to execute pressing works, and which are essential to the keeping open of the navigation; but many of those bondholders are incapacitated persons, and others will do nothing, so that no legal arrangement can be carried into effect without the aid of Parliament.

Sanguine opinions were expressed by gentlemen of great experience, and whose views are entitled to weight, that if the navigation were put into an efficient state, with moderate tolls, a great portion of the traffic would return to the river; as experience has proved, that for certain articles of merchandize water carriage is preferable to carriage by railway; added to which, there is a large and growing trade upon the banks of the Thames which would use the navigation. The same witnesses expressed strong opinions in favour of keeping open the navigation on public grounds. Castle, 207. 211. Woodhouse, 481. Gillett, 628. Gillett, 625.

The maintenance of the navigation is a benefit to the large Water Companies of London, to the water supply of Windsor Castle, to many mills and manufactories, to landowners and others. Simpson. Woodhouse.

It was proved to your Committee that well-worked canals and navigations could compete successfully with railways, and instances were given of Canal Companies paying large dividends, notwithstanding such competition; and it also appeared that that portion of the River Thames which is under the control of the Conservators, namely, between Staines and Yantlet Creek, has a large traffic, and is well and efficiently managed. Woodhouse, 469. 471, 472. Gillett, 633. Castle, 370. 636.

Your Committee have considered the expediency, with a view both to economy and efficiency, of combining under one management the whole of the navigable part of the River Thames, beginning at Oxford, and reaching as far down as the jurisdiction of the Thames Conservancy now extends. And it has appeared desirable to your Committee to effect such combination by placing the whole of the said part of the river under the management of the present Board of Thames Conservancy, if that Board were willing to undertake it on fair terms.

Engineers of great eminence were called by your Committee, and they all agreed that a sum exceeding 20,000 *l.* should at once be expended upon the works, not only to prevent a destruction of property, but possibly of life. Woodhouse, 522. Gillett, 640. Castle, 361.

The difficulties in the way of the Commissioners of raising the requisite funds for immediate purposes are obvious, and can only be met by legislation, for, as before shown, there is a debt of 88,400 *l.*, with arrears of interest; and last year the expenditure exceeded the income.

3. *As to the nature and state of the Works on the Navigation.*

The works consist for the most part of weirs and pound locks. There are 30 of the latter between Oxford and Staines.

Castle, 215, 217. There are 25 in connection with 29 mills and waterworks.

The water power is dependent on the head of water dammed up by the weirs and pound locks, and the flow should be regulated by those works; but the powers of the old lock-owners greatly interfere with the regulation of the flow and the economy of water.

It was also proved to your Committee, that the landowners and their tenants have erected embankments for the reclamation of land, which have had the effect of contracting the waterway, and in times of flood to the great prejudice of navigation, as the increased velocity of the flow renders it impossible for craft to make head against the stream.

The whole of the engineering witnesses agreed that the works were in a dilapidated and dangerous state, and if they gave way, serious consequences must ensue from the destruction of the works and property below, and from the inundation of the adjoining lands.

It was also proved to your Committee, that the discharge of sewage has of late years become a serious impediment to the navigation, as at times the accumulation of solid matter is so great in the locks that it has to be removed at considerable expense, and delay occurs before the lock gates can be opened.

4. *As to the Traffic on the Navigation.*

There are several important canals connected with the navigation of the Thames, amongst which are the Grand Junction Canal, the Oxford Canal, the Coventry Canal, and the Ashby-de-la-Zouch Canal, upon the whole of which there is a large traffic, particularly in coals; a considerable portion of this traffic finds its way to the Thames, and the witnesses agree that a larger portion would be taken to that river if the present high charges and other impediments were abolished, and the navigation put into an efficient state.

There is also a considerable traffic wholly dependent upon the navigation of the river, and that traffic would greatly increase if the navigation were put into a safe and proper state. It appears that several traders have discontinued the use of the navigation in consequence of the dangerous state of some of the locks and works, and an apprehension of the destruction of their property.

5. *As to the last head of their Inquiry.*

Your Committee have examined many competent witnesses as to the future management, improvement, and maintenance of the navigation of the river, and have agreed to the following RESOLUTIONS:—

1. That the maintenance and improvement of the Upper Navigation of the River Thames is important, and that all practical steps ought to be taken to render it self-supporting.

2. That the navigation of the Upper and Lower Thames should be placed under the same management

3. That this management should be in the hands of the "Conservators of the Thames," with such addition to their number as a due regard to a proper representation of the local interests of the Upper Navigation may require.

4. That no tolls or charges should be levied on the Upper Navigation which are not applied to its support.

5. That all existing works, rights, and charges injuriously affecting the Upper Navigation should be put an end to upon such terms as to compensation as Parliament may determine.

6. That separate accounts should be kept in respect of the Upper and Lower Navigations, and that power should be given to make the revenue arising from the

the Lower Navigation a collateral security for moneys raised for the purposes of the Upper Navigation.

7. That all fishing rights be so exercised as not to interfere with the navigation of the river.

8. That powers be given to raise the money necessary for the above purposes, such money to be the first charge on the revenues of the Upper Navigation; such powers being given for compounding with the existing bondholders as Parliament may determine.

9. That a Bill be introduced by the Board of Trade to give effect to the above recommendations.

22 June 1865.

PROCEEDINGS OF THE COMMITTEE.

Veneris, 28° *die Aprilis*, 1865.

MEMBERS PRESENT:

Mr. Hankey.	Mr. Bathurst,
Mr. Milner Gibson.	Colonel Knox.
Mr. Malins.	Mr. Gregory.
Mr. Yorke.	Mr. Neate.

Mr. Milner Gibson was called to the Chair.

[Adjourned to Thursday next, at Twelve o'clock.

Jovis, 4° *die Maii*, 1865.

MEMBERS PRESENT:

Mr. Milner Gibson in the Chair.

Sir S. Northcote.	Mr. Baring.
Mr. Yorke.	Mr. Bathurst.
Mr. Neate.	Mr. Fenwick.
Sir F. Smith.	Mr. Gregory.
Mr. Dawson Damer.	Sir F. Goldsmid.
Colonel Knox.	Mr. Hankey.

Mr. *Graham*, Mr. *Castle*, and Mr. *Leach*, were severally examined.

[Adjourned till Tuesday next, at Twelve o'clock.

Martis, 9° *die Maii*, 1865.

MEMBERS PRESENT:

Mr. Milner Gibson in the Chair.

Mr. Dawson Damer.	Colonel Knox.
Mr. Yorke.	Mr. Hankey.
Mr. Neate.	Mr. Fenwick.
Sir F. Smith.	Mr. Locke.

Mr. *Woodhouse*, Mr. *Gillett*, Dr. *Buckland*, and Mr. *William Ward*, were severally examined.

[Adjourned till Thursday next, at Twelve o'clock.

Jovis, 11° *die Maii*, 1865.

MEMBERS PRESENT:

Mr. MILNER GIBSON in the Chair.

Mr. Neate.	Mr. Fenwick.
Mr. Dawson Damer.	Mr. Hankey.
Mr. Yorke.	Colonel Knox.

Mr. *Simpson* examined.

[Adjourned till Tuesday, May 16, at One o'clock.

Martis, 16° *die Maii*, 1865.

MEMBERS PRESENT:

Mr. MILNER GIBSON in the Chair.

Sir F. Smith.	Mr. Dawson Damer.
Colonel Knox.	Mr. Hankey.
Mr. Neate.	Mr. Baring.
Sir F. Goldsmid.	

The Rev. *J. C. Clutterbuck*, Mr. *W. Blandy*, *J. T. Norris*, Esq. (a Member of the House), Dr. *A. R. Adams*, Mr. *James Castle*, and Mr. *Jonathan Thorpe*, were severally examined.

[Adjourned till Thursday, the 1st of June.

Jovis, 1° *die Junii*, 1865.

MEMBERS PRESENT:

Mr. MILNER GIBSON in the Chair.

Mr. Neate.	Mr. Bathurst.
Mr. J. R. Yorke.	Sir F. Goldsmid.
Colonel Knox.	Mr. Hankey.
Mr. Dawson Damer.	Mr. Baring.
Mr. Henry Fenwick.	

Motion made, and Question, "That Mr. Butler, the Mayor of Reading, and Mr. Pring, two of the bondholders, be allowed to give evidence as to their views and those of other bondholders with reference to their rights and the compensation they are willing to accept"—(*Sir F. Goldsmid*)—put, and *agreed to.*

Mr. *Butler* and Mr. *Pring* were severally examined.

Draft Resolutions proposed by the Chairman, read 1o as follow:—

"1. That the maintenance and improvement of the Upper Navigation of the River Thames is important, and that all practicable steps ought to be taken to render it self-supporting.

"2. That the navigation of the Upper and Lower Thames should be placed under the same management.

"3. That this management should be in the hands of the 'Conservators of the Thames,' with such addition, if any, to their number as a due regard to a proper representation of the local interests of the Upper Navigation may require.

"4. That no tolls or charges shall be levied on the Upper Navigation which are not applied to its support.

"5. That all existing works, rights, and charges injuriously affecting the Upper Navigation should be put an end to upon such terms as to compensation, if any, as Parliament may determine.

"6. That

"6. That separate accounts should be kept in respect of the Upper and Lower Navigations, and that power should be given to make the revenue arising from the Lower Navigation a collateral security for money raised for the purposes of the Upper Navigation.

"7. That all fishing in the Upper Navigation should be placed under the control of the Conservators, with a due regard to proprietary rights, if any.

"8. That powers be given to raise the money necessary for the above purposes, such money to be the first charge on the revenues of the Upper Navigation.

"9. That a Bill be introduced in the next Session by the Board of Trade to give effect to the above recommendations."

Draft Resolutions proposed by Mr. Neate, read 1° as follows:—

"1. That the Commission for the Management of the Navigation of the Upper Thames is in a bankrupt state, and is unable to provide for the repair and restoration of the locks and other works required for the maintenance of such navigation.

"2. That such works are in a state of ruinous decay, and that unless immediate steps are taken for their repair and renovation, the navigation of the Upper Thames will very shortly be stopped, and, in other ways, much inconvenience and some danger to the public is likely to ensue.

"3. That there is reasonable ground for believing, from the evidence given to your Committee, that if the navigation of the Upper Thames was in a good working state, sufficient traffic would be retained on it, or attracted to it, to repay the expenses of restoring the works, and ultimately to repay the money that might be borrowed for that purpose, if the existing bond debt of the Commission were postponed to the new security.

"4. That the works required for maintaining the navigation are also of great, and, in some respects, necessary use for other purposes of great importance, either to the agriculture of the land adjoining the river, or to the health of the towns and villages dependent on it for their supply of water, especially the City of London; and that the Thames, in these its various uses, may by future legislation be properly made the source of revenue.

"5. That in a future Session it will be expedient to consider the whole subject of the Thames, in its various uses and appliances, and in reference to the composition of the body to whom its management shall be entrusted.

"6. That in the meanwhile it is a matter of urgent necessity to provide for the repair and restoration of the present navigation works; that about 30,000 *l.* is requisite for that purpose, and the Committee recommend that the Public Works Loan Commissioners should be empowered to advance 60,000 *l.* to the present Commissioners of the Thames Navigation, power being given at the same time to the said Commissioners to lay out 10,000 *l.*, part of that money, in buying up the outstanding bonds, or otherwise procuring the postponement of them to the proposed security."

Motion made, and Question proposed, "That the Draft Resolutions proposed by the Chairman be now read 2°, paragraph by paragraph."—Amendment proposed to leave out the words, "the Chairman," in order to insert the words "Mr. Neate" instead thereof—(Mr. *Neate*).—Question put, "That the words 'the Chairman' stand part of the Question."—The Committee divided:

Ayes, 5.	Noes, 3.
Sir Francis Goldsmid.	Mr. Neate.
Mr. Bathurst.	Mr. Yorke.
Mr. Henry Fenwick.	Colonel Knox.
Mr. Hankey.	
Mr. Dawson Damer.	

Main Question put, and *agreed to.*

Motion made and Question, "That the maintenance and improvement of the Upper Navigation of the River Thames is important, and that all practicable steps ought to be taken to render it self-supporting"—put, and *agreed to.*

Motion made, and Question put, "That the navigation of the Upper and Lower Thames should be placed under the same management."—The Committee divided:

Ayes, 5.	Noes, 3.
Mr. Damer.	Mr. Neate.
Sir Francis Goldsmid.	Mr. Yorke.
Mr. Bathurst.	Colonel Knox.
Mr. Henry Fenwick.	
Mr. Hankey.	

Motion made, and Question, "That this management should be in the hands of the 'Conservators of the Thames,' with such addition, if any, to their number as a due regard to

to a proper representation of the local interests of the Upper Navigation may require"—put, and *agreed to.*

Motion made and Question, "That no tolls or charges should be levied on the Upper Navigation which are not applied to its support"—put, and *agreed to.*

Motion made and Question, "That all existing works, rights, and charges injuriously affecting the Upper Navigation should be put an end to upon such terms as to compensation, if any, as Parliament may determine"—put, and *agreed to.*

Motion made and Question, "That separate accounts should be kept in respect of the Upper and Lower Navigations and that power should be given to make the revenue arising from the Lower Navigation a collateral security for moneys raised for the purposes of the Upper Navigation"—put, and *agreed to.*

Motion made and Question proposed, "That all fishing in the Upper Navigation should be placed under the control of the Conservators, with a due regard to proprietary rights, if any."—Amendment proposed, to leave out all the words from the word, "That" to the end of the Question, in order to insert the words, "all fishing rights be so exercised as not to interfere with the navigation of the river"—(Mr. *Hankey*)—instead thereof.—Question, "That the words proposed to be left out stand part of the Question"—put, and *negatived.*—Words added.—Question, as amended—put, and *agreed to.*

Motion made and Question proposed, "That powers be given to raise the money necessary for the above purposes, such money to be the first charge on the revenues of the Upper Navigation."—Amendment proposed, at the end of the Question, to add the words, "such powers being given for compounding with the existing bondholders, as Parliament may determine"—(Sir *F. Goldsmid*).—Question, "That those words be there added"—put, and *agreed to.*—Question, as amended, put, and *agreed to.*

Motion made and Question, "That a Bill be introduced by the Board of Trade to give effect to the above recommendations"—put, and *agreed to.*

[Adjourned to Monday, the 19th June, at One o'clock.

Jovis, 22° *die Junii*, 1865.

MEMBERS PRESENT:

Mr. MILNER GIBSON in the Chair.

Mr. Baring.	Sir F. Goldsmid.
Sir S. Northcote.	Mr. Yorke.
Colonel Knox.	Mr. Bathurst.
Mr. Fenwick.	Mr. Locke.
Mr. Neate.	

Draft Report proposed by the Chairman, read 1°, as follows:—

"1. IN the discharge of the duties imposed on your Committee, they divided their inquiry into the following heads:—

"1st. The constitution and powers of the Commissioners entrusted with the management of the upper navigation of the River Thames; that is, from Staines to Cricklade.

"2d. The financial position of the Commissioners.

"3d. The nature and state of the works on the navigation.

"4th. The traffic on the navigation.

"2. In the selection of witnesses, your Committee called gentlemen who had personal knowledge and practical experience of the river, and who, from their high professional positions and intelligence, enabled your Committee to fully exhaust the subject of the inquiry referred to them.

"1. *As to the Constitution and Powers of the Commissioners.*

Note.—The figures in the margin refer to the number of the answer in the printed evidence.

Graham, 6.

"3. The 'Thames Commissioners' were constituted and derive their powers under the following Acts of Parliament:—

24 Geo. 2, chap. 8.	28 Geo. 3, chap. 51.
11 Geo. 3, „ 45.	35 Geo. 3, „ 106.
15 Geo. 3, „ 11.	52 Geo. 3, „ 47.

Graham, 6. "4. Their jurisdiction extends from 'the City Stone, above Staines Bridge' (where the Thames Conservators' jurisdiction terminates), to Cricklade, a distance of 107 miles, but navigable only for 80 miles.

"5. The present number of Commissioners is between 600 and 700, and they consist of gentlemen who either qualify in right of land of the value of 100 *l.* a year, held in the counties through which the river passes, or who are persons possessing personal estates of the value of 3,000 *l.*, living in those counties, or who are bondholders to the extent of 500 *l.* There are also the following *ex officio* members: the Representatives in Parliament for the counties of Wilts, Gloucester, Berks, and Bucks, and for all the cities and boroughs within those counties, and for the University of Oxford; also the representatives in Parliament for the counties of Middlesex and Surrey, and for the Cities of London and Westminster and the Borough of Southwark; the Lord Mayor and Aldermen of the City of London, the Vice Chancellor and heads of college and halls in the University of Oxford, the Dean and Canons of Christ Church, the Dean and Canons of Windsor, the Provost and Fellows of Eton College, the rectors and incumbents of the several parishes that border upon the Thames and Isis on both sides, from Staines to Cricklade; the Mayors and Recorders of Oxford, Abingdon, Wallingford, Reading, Henley, Maidenhead, and Windsor; the senior Bridge-Warden of Great Marlow, and the Clerk of Her Majesty's Board of Works residing at Windsor Castle for the time being.

"6. The river is practically managed by a committee of 15 Commissioners, chosen from five districts into which the navigation is divided, three from each, but the proceedings of that committee are controlled by general meetings of the Commissioners.

Graham, 25. Graham, 24. "7. The Commissioners are not a corporation, which is embarrassing both to themselves and to the public, for, as appeared from an opinion of counsel laid before Your Committee, individual members of the Board of Commissioners may be held personally liable for their acts, whilst the public may be subject to great difficulties in enforcing claims against the trust.

Graham, 23. "8. Indeed, it was proved that creditors are afraid to encounter those difficulties.

Castle, 352. "9. The constitution of the Commission is unlike the constitution of any modern trust of a like nature, and is so obviously objectionable that Your Committee feel it unnecessary to offer any reasons for recommending an alteration.

"10. The powers of the Commissioners are very restricted and exclusively confined to the preservation of the water of the navigation: and in the exercise of those powers they are greatly embarrassed by mill and lock-owners upon the river, and by persons said to possess rights of fishing, all of whom have power to draw off and exercise a control over the water of the navigation, to the great prejudice and inconvenience of the traffic.

Graham, 41, 42. 44. "11. Another serious impediment to the proper development of the traffic of the navigation is the power vested in the owners of about 20 old locks and weirs, to levy tolls, independently of and without concert with the Commissioners, on vessels passing up and down the river, but in respect of portions of the river no longer forming part of the navigation; the effect of which is, in the first place, that the trade has to pay heavily for works from which it derives no benefit; and in the second place, that the trader never knows what he has to pay, as the tolls are variable, and he is consequently obliged to give his servant a sum of money for each journey, to pay the tolls, and trust to his honesty, a system much complained of and very prejudicial to the success of the navigation.

Graham, 50. 47. "12. There is no power to compel the old lock-owners to charge a uniform toll, and the Commissioners have failed to convince them of the advantages which would result from offering the public fixed through rates and other facilities. The lock-owners render no service for the tolls taken by them.

"13. The value of the privileges of these lock-owners depends on the amount of traffic, and if that traffic should continue to decrease, as it has lately been doing, those privileges will soon become valueless.

"2. *As to the Financial Position of the Commissioners.*

"14. They were authorised to borrow the following sums of money:—

	£.
By the 11 Geo. 3, c. 45	50,000
„ 28 Geo. 3, c. 51	25,000
„ 52 Geo. 3, c. 47	25,000
TOTAL £.	100,000

Graham, 9.

The amount actually raised was	95,000
Of this sum there has been repaid	6,600
Which leaves a total debt of £.	88,400

"15. The

" 15. The above debt is owing to about 112 persons, and the only security is upon the tolls and works of the Commissioners. 9, 13.

" 16. The greater part (60,500 *l.*) of the money was borrowed at 5 *l.* per cent. interest, and the remainder at 4½ per cent. 17.

" 17. In consequence of the great falling off of the traffic in 1851, the Commissioners were obliged to reduce the rate of interest payable to the bondholders to 4 *l.* per cent. 20.

" 18. The rate of interest was further reduced in 1852 to 3 per cent.
" " " 1853 " 2 "
" " " 1857 " 1 "
" " " 1862–3 " 10 *s.* "
and since then no interest has been paid.

" 19. The salaries of all the officers have been reduced, and at Christmas 1864 the workmen were discharged. Graham, 33, 178.

" 20. The establishment of railways seems to have diverted a great part of the traffic from the navigation, and since 1845 there has been an annual falling off in the receipt of tolls. 134.

In 1845, they amounted to	-	-	£. 14,011. 13. 2.
In 1864 " "	-	-	3,097. 6. 8.

" 21. The total income of the Commissioners for the past year (1864) was 3,173 *l.*, and their expenditure, 3,209 *l.*; so that there was an excess of expenditure over income of 36 *l.*; and unless the requisite funds are provided to improve the navigation, and the traffic is encouraged by low uniform tolls and otherwise, the income must continue to decrease, and this important navigation be shortly closed to traffic.

" 22. The trust is, in fact, in an insolvent state, and many of the creditors have offered to take 2 *s.* in the pound for their claims. 75.

" 23. Attempts have been made to effect an arrangement with the bondholders for raising further monies to execute pressing works, and which are essential to the keeping open of the navigation; but many of those bondholders are incapacitated persons, and others will do nothing, so that no legal arrangement can be carried into effect without the aid of Parliament.

" 24. Sanguine opinions were expressed by gentlemen of great experience, and whose views are entitled to weight, that if the navigation were put into an efficient state, with moderate tolls, a great portion of the traffic would return to the river; as experience has proved, that for certain articles of merchandise water-carriage is preferable to carriage by railway; added to which, there is a large and growing trade upon the banks of the Thames which would use the navigation. The same witnesses expressed strong opinions in favour of keeping open the navigation on public grounds. Castle, 207. 211. Woodhouse, 481. Gillett, 628. Gillett, 625.

" 25. The maintenance of the navigation is a benefit to the large Water Companies of London, to the water supply of Windsor Castle, to many mills and manufactories, to land-owners and others. Simpson. Woodhouse.

" 26. It was proved to your Committee that well-worked canals and navigations could compete successfully with railways, and instances were given of Canal Companies paying large dividends; and it also appeared that that portion of the River Thames which is under the control of the Conservators, namely, between Staines and Yantlet Creek, has a large traffic. It is well and efficiently managed; the income is large; although the navigation of the Conservators joins that of the Commissioners, there has been no joint action in the working of the traffic on the river to the loss and inconvenience of both trusts as well as to the public. This apparent want of harmony has arisen chiefly from a lack of power in the Commissioners to control the owners of the old docks and weirs, and an indisposition on the part of the latter to charge reduced or uniform tolls. Woodhouse, 469. 471, 472. Gillett, 633. Castle, 370. 636.

" 27. The government of one river by two bodies must entail additional expense in management, and as the lower part of the river is well managed, and in a solvent state, your Committee think it desirable that the whole of the navigable part of the river should be placed under the same management, and particularly as such a step would be the most effectual way of getting the works executed, which are so urgently required for the preservation of the upper navigation, for the Conservators have a direct interest in preserving the upper navigation; and from the evidence of the Deputy Chairman of the Conservators, your Committee gathered that he and his colleagues would not object to a transfer to themselves of the conservancy of the entire navigation. Thorp, 1390, 1391, 1392.

" 28. Engineers of great eminence were called by your Committee, and they all agreed that a sum exceeding 20,000 *l.* should at once be expended upon the works, not only to prevent a destruction of property, but possibly of life. Woodhouse, 522. Gillett, 640. Castle, 361.

" 29. The difficulties in the way of the Commissioners of raising the requisite funds for immediate purposes are obvious, and can only be met by legislation; for, as before shown, there is a debt of 88,400 *l.*, with arrears of interest, and last year the expenditure exceeded the income.

"3. *As to the Nature and State of the Works on the Navigation.*

"30. The works consist for the most part of weirs and pound locks. There are 30 of the latter between Oxford and Staines.

Castle, 215, 217. "31. There are 25 in connection with 29 mills and waterworks.

"32. The water-power is dependent on the head of water dammed up by the weirs and pound locks, and the flow should be regulated by those works; but the powers of the old lock-owners greatly interfere with the regulation of the flow and the economy of water.

"33. It was also proved to your Committee, that the landowners and their tenants have erected embankments for the reclamation of land, which have had the effect of contracting the waterway, and in times of flood to the great prejudice of navigation, as the increased velocity of the flow renders it impossible for craft to make head against the stream.

"34. The whole of the engineering witnesses agreed that the works were in a dilapidated and dangerous state, and, if they gave way, serious consequences must ensue from the destruction of the works and property below, and from the inundation of the adjoining lands.

"35. It was also proved to your Committee, that the discharge of sewage has of late years become a serious impediment to the navigation, as at times the accumulation of solid matter is so great in the locks that it has to be removed at considerable expense and delay before the lock gates can be opened.

"4. *As to the Traffic on the Navigation.*

"36. There are several important canals connected with the navigation of the Thames, amongst which are the Grand Junction Canal, the Oxford Canal, the Coventry Canal, and the Ashby-de-la-Zouch Canal, upon the whole of which there is a large traffic, and particularly in coals, a considerable portion of which finds its way to the Thames; and the witnesses agree that a larger portion would be taken to that river if the present high charges and other impediments were abolished, and the navigation put into an efficient state.

"37. There is also a considerable traffic wholly dependent upon the navigation of the river, and that that traffic would greatly increase if the navigation were put into a safe and proper state. It appeared that several traders have discontinued the use of the navigation in consequence of the dangerous state of some of the locks and works, and an apprehension of the destruction of their property.

"5. *As to the last Head of their Inquiry.*

"38. Your Committee have examined many competent witnesses as to the future management, improvement, and maintenance of the navigation of the river, and have agreed to the following RESOLUTIONS:—

"1. That the maintenance and improvement of the Upper Navigation of the River Thames is important, and that all practical steps ought to be taken to render it self-supporting.

"2. That the navigation of the Upper and Lower Thames should be placed under the same management.

"3. That this management should be in the hands of the 'Conservators of the Thames,' with such addition to their number as a due regard and proper representation of the local interests of the Upper Navigation may require.

"4. That no tolls or charges should be levied on the Upper Navigation which are not applied to its support.

"5. That all existing works, rights, and charges injuriously affecting the Upper Navigation should be put an end to upon such terms as to compensation as Parliament may determine.

"6. That separate accounts should be kept in respect of the Upper and Lower Navigations, and that power should be given to make the revenue arising from the Lower Navigation a collateral security for moneys raised for the purposes of the Upper Navigation.

"7. That all fishing rights be so exercised as not to interfere with the navigation of the river.

"8. That powers be given to raise the money necessary for the above purposes, such money to be the first charge on the revenues of the Upper Navigation; such powers

powers being given for compounding with the existing bondholders as Parliament may determine.

"9. That a Bill be introduced by the Board of Trade to give effect to the above recommendations."

Question, "That this Report be read 2°, paragraph by paragraph,"—put, and *agreed to.*

Paragraph 1 *agreed to.*

Paragraph 2, amended, and *agreed to.*

Paragraph 3 postponed.

Paragraphs 4 and 5, amended, and *agreed to.*

Paragraph 6 *agreed to.*

Paragraph 7, amended, and *agreed to.*

Paragraph 8 *agreed to.*

Paragraphs 9, 10, and 11, amended, and *agreed to.*

Paragraph 12.—Amendment proposed in line 5, after the word "Navigation" to leave out all the words to the end of the paragraph, in order to insert the following words: "This right was reserved to them by the original Act constituting the Thames Navigation Commission, of which the main object was to provide for the erection of new locks called pound locks, that is, locks with double gates, through which the navigation was thenceforth to pass, which Act gave to the owners of the old locks the right of receiving the same tolls as they had been receiving heretofore, and left them in possession of any mill rights that were then existing"—(Mr. *Neate*)—instead thereof.—Question, "That the words proposed to be left out stand part of the paragraph,"—put, and *negatived.*

Question, "That those words be there added,"—put, and *agreed to.*

Paragraph, as amended, *agreed to.*

Paragraphs 13 and 14, *agreed to.*

Paragraph 15, amended, and *agreed to.*

Paragraph 16 *agreed to.*

Paragraphs 17 and 18, amended, and *agreed to.*

Paragraphs 19 to 25, severally *agreed to.*

Paragraph 26, amended, and *agreed to.*

Paragraph 27 *disagreed to.*

Amendment proposed, after paragraph 27, to insert the following paragraph: "Your Committee have considered the expediency, with a view both to economy and efficiency, of combining under one management the whole of the navigable part of the river Thames, beginning at Oxford, and reaching as far down as the jurisdiction of the Thames Conservancy now extends. And it has appeared desirable to the majority of your Committee to effect such combination by placing the whole of the said part of the river under the management of the present Board of Thames Conservancy, if that Board were willing to undertake it on fair terms"—(Mr. *Neate.*)—Amendment made, by striking out the words "the majority of," in line 5.—Question, "That this paragraph, as amended, be inserted in the proposed Report,"—put, and *agreed to.*

Amendment proposed, after the last paragraph, to insert the following paragraph: "The Board of Conservancy have made no official communication to your Committee on the subject; but your Committee have some reason to believe, from the evidence of Mr. Thorp, the Vice Chairman of that Board, that the Board would be willing to undertake the management of the upper part of the river if no part of their present revenue were applicable to the expenses of the new district, or to the payment of the debt with which it is charged; and if the management of the whole, and the patronage connected with it, were left in their hands without any change in their constitution"—(Mr. *Neate.*)—Amendment, by leave, *withdrawn.*

Another amendment proposed, after the last paragraph, to insert the following paragraph: "Your Committee have expressed their opinions upon this point in the Resolutions embodied in the Report; but your Committee think it right to observe, that they have been informed by their Chairman that he had received a memorial from all the mayors of the different towns and cities on the banks of the river above Staines, against the proposed transfer; and your Committee are not in a condition to say how far such a transfer would be acceptable to the landowners of the Thames valley, or of the counties through which the river flows"—(Mr. *Neate*).—Amendment, by leave, *withdrawn.*

Paragraphs 28 to 34 severally *agreed to.*

Paragraphs 35, 36, and 37, severally amended, and *agreed to.*

Postponed paragraph 3 amended, and *agreed to.*

Question, "That this Report be the Report of the Committee to the House,"—put, and *agreed to.*

Resolved, That the Chairman do move for power to report Opinion and Observations, together with the Minutes of Evidence, to The House.

Ordered, To Report.

EXPENSES OF WITNESSES.

NAME OF WITNESS.	Profession or Condition.	From whence Summoned.	Number of Days Absent from Home, under Orders of Committee.	Expenses of Journey to London and Back.	Allowance during Absence from Home.	Total Expenses Allowed to Witness.
				£. s. d.	£. s. d.	£. s. d.
Thomas Hedges Graham	Solicitor	Abingdon	3	1 4 –	6 6 –	7 10 –
James Castle	Engineer	Oxford	3	1 4 –	6 6 –	7 10 –
William Loynes	Coal Merchant	Eton	1	– 10 –	1 1 –	1 11 –
William Bland	Banker	Reading	1	– 18 –	1 1 –	1 19 –
George Honey	Barge Master	Reading	1	– 18 –	1 1 –	1 19 –
William Clark	Timber Merchant	Benson	1	– 18 –	1 1 –	1 19 –
J. C. Clutterbuck	Clergyman	Long Wittenham	1	– 18 –	1 1 –	1 19 –
John Gillett	Engineer	Oxford	1	1 4 –	2 2 –	3 6 –
William Ward	Coal Merchant	Oxford	1	1 4 –	1 1 –	2 5 –
Thomas Hilliard	Coal Merchant	Wallingford	1	– 18 –	1 1 –	1 19 –
Dr. Adams	Barrister-at-Law	Oxford	1	1 4 –	3 3 –	4 7 –
John Ashley	Coal Merchant	Pangbourne	1	– 16 –	1 1 –	1 17 –
				Total £.		38 1 –

MINUTES OF EVIDENCE.

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MINUTES OF EVIDENCE.

Jovis, 4° die Maii, 1865.

MEMBERS PRESENT:

Mr. Baring.	Mr. Hankey.
Mr. Bathurst.	Colonel Knox.
Mr. Dawson Damer.	Mr. Neate.
Mr. Henry Fenwick.	Sir Stafford Northcote.
Mr. Milner Gibson.	Sir Frederic Smith.
Sir Francis Goldsmid.	Mr. John Reginald Yorke.

THE RIGHT HON. T. MILNER GIBSON, IN THE CHAIR.

Mr. THOMAS HEDGES GRAHAM, called in; and Examined.

Mr. *T. H. Graham.*

4 May 1865.

1. *Chairman.*] WHAT office do you hold?—I am General Clerk to the Commissioners of the Upper Districts of the Thames.

2. How long have you held that office?—Since June 1862.

3. And your father was in the office before you, was he not?—My father filled the office for 22 years before me.

4. What are your duties?—My duties are, to prepare for and attend all the general meetings of the Commissioners, to make minutes of them, to attend all the committee meetings, and to advise them generally upon all legal business which comes before them; to conduct all the correspondence; to keep the accounts; to countersign all the drafts; to pay them and produce the receipts; to prepare and publish the annual accounts; to conduct any negotiation for the purchase of land, and prepare contracts; to advise upon all documents on behalf of the Commissioners, and to transact all their legal business.

5. You acted as clerk for your father for some time previous to his death, did you not?—Yes; he was in ill health, and I acted a good deal for him for the last two years of his life.

6. Will you explain to the Committee the constitution of the trust, stating the Acts of Parliament under which it is regulated?—It is constituted by six Acts; the 24 Geo. 2, c. 8; the 11 Geo. 3, c. 45; the 15 Geo. 3, c. 11; the 28 Geo. 3, c. 51; the 35 Geo. 3, c. 106; and the 52 Geo. 3, c. 47. The navigation is divided, under the 11 Geo. 3, c. 45, into six districts; the first of which is between the City of London and the City Stone above Staines Bridge; that has now passed from the jurisdiction of the Thames Commissioners, and is vested in the Thames Conservancy Board. The second district is between the City Stone and Boulter's Lock; the third between Boulter's Lock and Mapledurham; the fourth between Mapledurham and Shillingford; the fifth between Shillingford and Oxford; and the sixth between Oxford and Cricklade. Those last five districts are now vested in and are managed by the Thames Commissioners. The Thames Commissioners are a body partly of Commissioners who either qualify in right of land of the value of 100*l.* a year, held in the counties through which the river passes, or are persons who possess personal estates of the value of 3,000*l.*, living in those counties, or who are bondholders to the extent of 500*l.* Then there are *ex officio* members, of whom there are a great number:—"The Representatives in Parliament for the counties of Wilts, Gloucester, Oxford, Berks, and Bucks, and for all cities and towns within the same, and for the University of Oxford, the Representatives in Parliament for the counties of Middlesex and Surrey and for the cities of London and Westminster and the borough of Southwark, the Lord Mayor and Aldermen of the city of London, the Vice-Chancellor and Heads of Colleges and Halls in the University of Oxford, the Dean and Canons of Christchurch, the Dean and Canons of Windsor, the Provost and Fellows of Eton College, the Rectors and Incumbents of the several parishes that border upon the Thames and Isis on both sides from Staines to Cricklade, the Mayors and Recorders of Oxford, Abingdon, Wallingford, Reading, Henley, Maidenhead and Windsor, the senior Bridgewarden of Great Marlow, and the Clerk of His Majesty's Board of Works residing at Windsor Castle for the time being."

7. What is the number altogether of Commissioners qualified to act?—There are a great number

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number of Commissioners who are qualified; it is impossible to say the number, because, of course, Members of Parliament who have qualified for any particular place are disqualified on ceasing to represent that place, nor have I any means of ascertaining the number of those who have died, but I should think that there are 600 or 700 Commissioners now.

8. Have they, any of them, a personal interest in the navigation?—None of them have any personal interest, except that a few of them may be bondholders and a few may be millowners, but the general body have no personal interest in it. The management of the river devolves upon a committee of 15 persons, who are chosen, three from each district, annually. In the last week of October there are district meetings for the purpose, at each of which three members are appointed as a committee for the ensuing year. Those, together amounting to 15, perform all the duties of the trust, excepting this, that they are controlled by general meetings of the Commissioners, and all their orders and regulations are made subject to the approbation and the confirmation of the general meetings.

9. Mr. *Dawson Damer.*] Where are the general meetings held?—One at Oxford, one at Windsor, one at Reading, one at Marlow, and one at Wallingford. There are four quarterly meetings, but the one at Wallingford is an annual meeting for the election of committees; they are held on stated days, and the meetings are always advertised. The length of the river under the control of the Commissioners is about 107 miles, but really only about 80 miles are navigable. Under the powers of their Acts, the Commissioners have borrowed a large sum of money, amounting to 95,000 *l.*, and the debt now remaining due is 88,400 *l.*; part of the original debt has been paid off, but there is now 88,400 *l.* due to about 112 different persons; the greater part of it was borrowed at 5 per cent., but a small part at 4½ per cent.

10. *Chairman.*] Are the accounts of the Commissioners audited?—They are not audited, excepting by the Commissioners generally at a meeting; they are always published.

11. And presented to Parliament?—And presented to Parliament. I have copies of (*handing them into the Committee*) the last annual account. I have not with me copies of any before this. They are always passed at a general meeting held at Abingdon; that is an extraordinary meeting for the purpose of auditing them.

12. You say that you have borrowed 88,400 *l.*?—That amount is now due.

13. Upon what security was that borrowed?—Upon the security of the tolls and the works of the Commissioners.

14. Mr. *Neate.*] Can you refer to the Act under which you borrowed?—Under the 11 Geo. 3, c. 45, we had power to borrow 50,000 *l.* Under the 28 Geo. 3, c. 51, we had power to borrow 25,000 *l.*, and under the 52 Geo. 3, c. 47, we had power to borrow a further sum of 25,000 *l.*, making altogether, 100,000 *l.*; 95,000 *l.* was borrowed, but part of it has been paid off, and 88,400 *l.* remains due.

15. *Chairman.*] All the locks and the toll-houses, and all the property of the Commissioners, in fact, have been assigned to those persons from whom you borrowed?—Yes, for securing their repayment. We have bought land since; that I imagine is not subject to their securities. We have bought land since, perhaps, to the value of 7,000 *l.* or 8,000 *l.*, but what the value would be apart from the use of the navigation, I am unable to say, probably not so much as that.

16. Mr. *Neate.*] Is that all land bought for the purposes of the navigation?—Yes; but since the date of the bonds.

17. Sir *Frederic Smith.*] The amount of the debt you say is 88,400 *l.*?—The total amount of the debt is 88,400 *l.*, of which 27,900 *l.* stands at 4½ per cent., and 60,500 *l.* at 5 per cent.

18. Sir *Stafford Northcote.*] Where is the item for the payment of interest on this last account?—There has none been paid since 1863.

19. *Chairman.*] Is it the fact that the interest has not been regularly paid?—It has not been paid since the summer of 1863 at all.

20. When did it begin to be irregular, or less than it ought to have been?—At Christmas 1851 the Commissioners were obliged to give notice that they should reduce the interest to 4 per cent. At Christmas 1852, it was further reduced to 3 per cent. At Christmas 1853, to 2 per cent. From Midsummer 1857, 1 per cent. only was paid; and from Midsummer 1862 to 1863 one payment of 10 *s.* has been paid, and since then nothing has been paid.

21. Have you heard from the mortgagees as to whether they are satisfied with that state of things?—They are exceedingly dissatisfied, of course, but not so much so as you might imagine. I do not get very many complaints from them; I think that they are satisfied that everything has been done that could be done, and that it is the effect of railway competition. Some years ago, in my father's time, there was a great deal of correspondence with them, but I think they are generally satisfied that everything has been done that could be done.

22. What are their legal rights?—They have power to enter into possession, we are advised, but I imagine that the difficulties they would encounter have been the means of preventing their doing so; they would have to take charge of the navigation, of course, and that deters them.

23. Has any creditor threatened to take possession?—Yes; one or two have threatened to take possession, but I have seen them, and they have stopped on my representing to them the difficulties they would have to contend with.

24. Will you explain whether there is any peculiarity about the legal rights of these creditors as compared with creditors under somewhat similar circumstances in other cases?—This (*handing in the same*) is a copy of a legal opinion which was taken.

25. Mr. *Neate.*] Have you the case?—I have not the case; the funds of the navigation being so low I did not have the case printed. It was an opinion taken in consequence of these threats, and of many threats of actions against the Commissioners. I should have stated that we are not a corporation, we are merely a private body, and therefore the Commissioners were liable to be sued for any works they ordered themselves, and thereupon at Christmas last, finding that they had no funds in hand, they discharged all their workmen and directed me to take the opinion of counsel as to their liability, and this was the result. The counsel here states that he sees no reason "why any one or more of the mortgagees should not enter into the receipt of the tolls, but the right to retain possession, or to acquire it as against

against others of the body who have already entered, would depend upon other considerations. There is nothing in the statute to abridge or regulate the rights of priority as between mortgagees in general, and I am not aware of any general enactment bearing upon the point; therefore it appears to me that the securities must rank in order of date. If, as may probably be the case, there be any considerable number which bear even date, an equality of rights would be preserved by the Court of Chancery. In the event of litigation taking place, questions of some complication would necessarily arise in dealing with the rights of the different classes of the mortgagees, because some have a claim upon all the tolls, while others can resort only to those which arise from certain portions of the undertaking. In adjudicating upon these questions, the Court of Chancery would marshal the securities so as to secure parties who have the lesser claims against an arbitrary enforcement of the rights of those who have the greater." I represented that to those who threatened to take possession, and they have given it up; they were mostly creditors of small amounts only.

26. Mr. *John Reginald Yorke.*] When was this opinion taken?—This was taken at Christmas last. Under the Turnpike Act there is a declaration that any creditors taking possession shall hold for the benefit of all other creditors, and shall divide rateably the proceeds of the trust. That we have not got in ours, and therefore Mr. Colt advises that any one creditor would not be bound to divide the receipts among the other creditors.

27. *Chairman.*] Are any of the persons who now hold the mortgage debt executors or trustees?—Yes, some are, I know.

28. Incapable, therefore, of consenting to any amicable arrangement?—Yes. I had a letter the other day from the representative of a large amount, 5,000*l.*, of debt, stating that he must apply to the Court of Chancery for permission. I sent a circular letter in March last to all the bondholders, to inquire whether they were willing to postpone their securities to a Government loan, which might be effected, or whether they would take the sum of 5 per cent. upon the debt, in the hope that some loan might be raised. I was not authorised to do that by the Committee, but I did it merely to see whether we could not buy up the old debt. I had letters from 10,300*l.* worth of the debt agreeing to postpone; 5,300*l.* worth agreed to take 5 per cent. I had dissents to either course by letters from people holding 3,200*l.*; and I have ascertained, from conversation, that others holding 9,000*l.*, which makes 12,200*l.* worth of dissent; 5,300*l.* would take 5 per cent. if paid immediately. From the others I have received no answers; many I do not know where to find. I have received many letters back from the Dead Letter Office.

29. Mr. *Neate.*] They are bound to register, are they not, before transferring?—I keep a register of the bond debt, and they ought to send the transfers to me to be registered; they do not do it, however.

30. *Chairman.*] What was the balance in hand at Christmas 1864?—The balance in hand was 112*l.* 13*s.* 7*d.*, but there were outstanding liabilities to considerably more than that amount. We owe, probably, 300*l.* now for towing-path rents, and other things; our towing-path rents are paid at our general meetings. I attend about two hours before the general meetings, for the purpose of paying them; I give notice of it in the papers, and those who do not come are paid in the following year. The second district is paid at Windsor, the third at Reading, the fourth at Wallingford, the fifth at Abingdon, and the sixth at Oxford.

31. Does that account which you handed in contain the receipts as well as the disbursements?—Yes; the receipts were, from tolls at pound locks 3,097*l.*, from rents 16*l.*, and sundries 60*l.* That sum of sundries consists of amounts that were given to us by private individuals towards keeping up the repairs of our works.

32. In the disbursements what is the first item?—One year's salary to officers, 450*l.*

33. Who were those officers?—I was one of them; I had 200*l.* a year at that time, since reduced to 150*l.*, and the general surveyor had 250*l.*, making 450*l.* Then salaries to pound-keepers, 689*l.* We have 42 men in our employ as pound and weir-keepers and ferry men, in one way or another; there are 35 pound locks on the river, 689*l.* 17*s.* 9*d.* includes all that; then comes for towing-path rents 178*l.*, rent of wharves, warehouses, and old locks, 86*l.*

34. Mr. *Neate.*] What are the warehouses?—We have in them materials for repairs.

35. And what is the rent of old locks?—We pay the rent of one of them for the purpose of easing the navigation. Then for horsing boats, and carriage of materials there is an item of 11*l.*; for sundry bills for repairs, 43*l.*; for general repairs, 902*l.*; for surveys and committees during the year, 50*l.*; and miscellaneous expenses, 27*l.*

36. *Chairman.*] Your income was 3,173*l.*, and your expenditure was 3,209*l.*?—Yes.

37. Without allowing anything for any interest on the debt?—Yes.

38. Were there repairs and materials sufficient for keeping the locks, and so forth, in an efficient state of repair?—The general surveyor would be able to speak better to that, but of my own knowledge I know it was only a system of patching.

39. Sir *Frederick Smith.*] Is the timber obtained under a contract?—No, it is bought by the general surveyor. He is responsible for buying it in the cheapest way.

40. Mr. *Neate.*] As to the alteration in the navigation which took place when the pound locks were established, can you tell us what that alteration was?—Before coming to that I should state that now there are works in exceeding bad repair, and if any of them were to fall down the whole navigation would be stopped. I think the general surveyor will state he is daily in fear of it.

41. *Chairman.*] Are there not certain parties who are bound to keep certain locks in repair irrespective of the Commissioners?—Yes, the old lock owners. There are about 20 old locks and weirs in private hands through which the boats formerly passed, but now under the new system of navigation we have made pound locks. Formerly when a barge wanted to go upwards, they were obliged to draw the water in the upper reach level with the lower reach. Now we have introduced a system of double gates, so that the water wasted is only a space of about 130 feet between the two pound lock gates. But in the Act of Parliament enabling us to make those pound locks the millowners and the old lock-owners got clauses introduced directing us to pay

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them the same tolls as they would have had to receive if their locks had been used.

42. Mr. *Neate.*] Can you refer us to the clause?—The 11 Geo. 3, c. 45, s. 12. We are also required to collect and pay over those tolls monthly to the old lockowners; they also have this further advantage that they are able to take upon the full tonnage that a boat may carry; we only take upon the actual tonnage on board, but the old lockowners are entitled to take their tonnage on the amount that the boat could carry irrespective of what is on board.

43. Mr. *John Reginald Yorke.*] What is the charge on empty boats?—There is none.

44. Mr. *Neate.*] In what relation do the lock-keepers stand to the old lockowners?—They are bound to receive and pay over to the lockowners once a month their dues.

45. The payments to the old lockowners do not appear in these accounts?—No, they are paid direct.

46. *Chairman.*] Some of these old locks are used, are they not?—No, none of them are used between Oxford and Staines. We have made the locks in every instance there. It is only between Oxford and Lechlade that the old locks are used.

47. The lockowners of those locks that are not used receive the tolls the same as if they were used?—Yes, just the same.

48. Mr. *Neate.*] Have you any account of the payments to the old locks?—I have an account of the receipts for last year which we believe to be correct. At Boulter's Lock, which is nearest to Staines, the receipts were 38*l.* 10*s*; at Marlow, 31*l.* 4*s.*; at Temple, 27*l.* 5*s.*; at Hambledon, 35*l.* The whole amount is about 700*l.*

49. *Chairman.*] These old lockowners, in fact, preserve the same tolls as they used to receive when the traffic passed through their locks?—Yes.

50. Has any attempt been made by the Commissioners to bring about any new arrangement with the old lockowners in consequence of the difficulties of the navigation?—We have had several meetings with them, and requested them often to join with us in the reduction of the tolls; but in June 1864 we made a last attempt, and then a great number of them agreed to reduce their tolls, but only on the understanding that the whole of them agreed. Two or three held out, and would not agree; therefore, the arrangement fell to the ground.

51. Mr. *Neate.*] Some are not in a condition to agree without special powers, are they?—I am not aware of that; it may be so.

52. Mr. *Dawson Damer.*] What is the whole sum received by the old locks?—£. 705 is the amount of the old lock tolls for last year.

53. *Chairman.*] Did you expect a considerable increase of traffic on the canal if you could have carried out those arrangements for the reduction of tolls?—We were led to expect a great increase, and we actually prepared tables which were to have come into operation on the 1st July last; but in consequence of two or three of the lockowners refusing to come to an agreement we were obliged to abandon that scheme, and we have lost traffic in consequence.

54. In fact, the standing out of these old lockowners prevents you from reducing your tolls so as to bring about an increase of traffic?—Yes; and especially between Oxford and Reading, where the old lock tolls are very much higher than they are below.

55. If any of these locks of yours were to fall into such decay that the navigation could not be carried on, the old lockowners would not get the tolls any more than yourselves, would they?—No, they would not; and in consequence also of our new works, they have had a very considerable increase up to the present time: the traffic increased, because our works enabled it to be carried on much better. They have got an increase by reason of our works, and the working power of their mills is very much increased by them. If our navigation was to cease, I imagine that they would have to open their locks again; the old lockowners would be obliged to pass the traffic in some way through the old weirs.

56. Mr. *John Reginald Yorke.*] What do you mean when you say through the weirs?—The weir is merely a dam across the river, with sluices and hatches in it.

57. Colonel *Knox.*] Are there not a great many weirs without sluices at all; are there not two such in the Marlow district?—The surveyor will be able to speak better as to that. Then we have also difficulties with the mills; our powers of controlling the mills are very defective. Our navigation is now worked by a system of flashes; that is to say, penning up the water which is brought down from above Oxford on certain days, and we have under our bye-laws fixed times for each of the millers to draw the water so as to pass the boats over the reach of water below his mill. He is bound to pen it up till it is to a certain height, and then at a certain hour to draw, so as to float the boat over any shallow places in the reach of water below him. Our Acts are very defective in that respect.

58. Mr. *Neate.*] What is the clause in the Act to which you now refer?—The clause of the Act is the 11 Geo. 3, c. 45. We are bound under that clause to keep a sufficient head of water for the working of their mills, and they have also a right to draw down the water without authority from the Commissioners for the purpose of repairing their mills, and even for fishing they may draw it down; "doing no damage or prejudice to the navigation" are the words of the Act, but they do an immense deal of damage to the navigation.

59. *Chairman.*] Is the Act which gives that right the 28 Geo. 3?—The 11 Geo. 3, c. 45.

60. The millowners contend that you must keep up a proper head of water for their mills?—Under the 28 Geo. 3, c. 51, s. 18, we have power to "make such bye-laws, rules, orders, and constitutions for the opening, shutting and management of all and every the locks and bucks on the said navigation, and the flood-gates thereto belonging, for the raising, lowering, penning, regulating and settling the height the water shall be kept up to at all the weirs and locks on the said navigation, and also for the giving of flashes or freshes of water, at all such times as the said Commissioners shall think necessary for the better carrying on the said navigation." But they contend that under the 11 Geo. 3, c. 45, we must keep up a proper head of water for working their mills, and the two Acts of Parliament therefore clash in that respect. The 28 Geo. 3, c. 51, enables us to fix the height for penning the water, but then we are obliged under the other Act to do that with reference to keeping a proper head of water for working the mills. They must be taken together. At page 132 you will find "that all and every the powers, authorities, provisions,

visions, restrictions, clauses, penalties, forfeitures, matters and things contained in the before recited Acts, made in the 11th, 15th, and 28th years of his present Majesty, shall be, and are hereby declared to be, and continue in full force and effect for executing and performing the several works by the said former Acts and this Act authorised." The rights of fishing especially, I think, require control; for the sake of a few fish the navigation is very much interfered with often.

61. Mr. *Neate.*] Practically, have difficulties arisen between the Commissioners and the millowners?—Yes; we were called upon last year only to put our works in repair by a millowner, and he threatened proceedings against us for not keeping our works in repair.

62. Do you mean that there have been disputes as to fixing the level?—Not as to the power of fixing the level, but we have continual complaints from the boatmen that they will not draw the water.

63. *Chairman.*] Where are the fishery rights reserved?—Under the 10th section of 11 Geo. 3:—"It shall and may be lawful to and for all and every person and persons having a right or privilege to fish with nets or bucks in any part of the said rivers, and to draw down the waters for that purpose, to retain, possess, and enjoy the said right and privilege of fishing at all seasonable times of the year, and drawing down the water, doing thereby no damage or prejudice to the navigation, and causing thereby no obstruction or hindrance to the boats, barges, or lighters on the said rivers;" still they do do it.

64. How does the exercise of those powers injure the navigation?—They draw at night for the purpose of catching the fish, and draw the water off which ought to be kept back for the purposes of navigation.

65. The Act says that they shall not so use their powers as to injure the navigation; have you endeavoured to enforce that provision?—I am not aware of any attempts having been made to enforce it, but complaints are made to me often. I write to the parties, and then they stop for a little while. It has never been brought before a general meeting; it is very difficult to get evidence too, as it is done in the night time.

66. Then with regard to the owners and occupiers of the mills, they have power to draw down the water in order to repair their mills or floodgates without any authority from the Commissioners?—Yes.

67. Is there any reservation there with regard to their doing no injury to the navigation?—No, not any.

68. Do you find it so exercised as to have that result?—They generally send us word that they wish to do it, and it is done at times when it is the least inconvenient. I cannot complain of them much in that respect, but the general surveyor is better able to speak on that point. I know that in many instances they have commenced the works late on Saturday night and completed them on the Sunday, in order to keep the navigation open.

69. These millowners are generally old lockowners, are they not?—Generally speaking they are.

70. Therefore, they have some interest in the navigation?—Yes; but I imagine that they would prefer, generally speaking, to shut the navigation up, and have more control of the water. I imagine that their own lock tolls do not compensate them for the loss to their mills.

71. The fishery folks do not care much about the navigation?—No.

72. Mr. *Neate.*] Can you tell me the number of mills?—Mr. Castle will tell you that.

73. *Chairman.*] Has there been any meeting held of the mortgagees to consider the question of any plan of raising money for the improvement of the navigation?—There was a meeting of the mortgagees to consider what steps they should take about a fortnight ago. I attended that meeting; and they postponed it till last Saturday, and I was unable to attend it then, having other matters in hand.

74. What steps did they propose?—To agree to postpone their securities to a further loan. They have not told me what course they will take. I imagine that, perhaps, not more than 10,000 *l.* worth of bonds was represented at that meeting.

75. Sir *Francis Goldsmid.*] You have not heard, perhaps, that at the meeting on Saturday they expressed a willingness to take 2 *s.* in the pound, and give up all their rights?—No, I have not heard that; but that feeling was expressed at a general meeting of the Commissioners. I imagine that there was not a very large number of bondholders represented at that meeting.

76. Mr. *Henry Fenwick.*] Have the Commissioners given any attention to the question of the mode of improving their pecuniary position; have they thought of any mode of getting out of their difficulties?—I think that we shall be able to produce evidence here to show that if the works were put in repair and an alteration made in our tolls, and some further alteration in the old lock tolls, we should be able to get a very considerable increase of traffic upon the river. Under our present Acts we are obliged to take one uniform toll from all people whatever their barges may be. It might be desirable to take a less toll on coal, for instance, than on other merchandise. That we cannot do at present.

77. You mean to say that there is no use in considering the question, because the law which gives you the power of taking tolls now is such that you cannot do as you would like to do?—We could under our present Act reduce the tolls sufficiently to get a great increase of traffic, I think, but we want an alteration of the law so far as the old lockowners are concerned, and when an alteration was made in that respect it would be very desirable that we should have power to put a discriminating toll, for example, on flour, on timber, and on coal. Now we are bound to put the same on all.

78. Do you mean that by lowering the tolls on certain goods you would get a large increase of traffic, which would pay you a larger amount than you receive now?—Yes; I think that we could produce evidence in regard to coal that if our tolls were lowered we should have a much larger quantity of traffic than we have even now; our traffic is already large in that.

79. Are your locks in such a state that they would carry the traffic if it were largely increased?—There is great difficulty about that; our locks are not in such a state as to enable us to carry a much greater traffic at present. I think that they require repairs before that can be done.

80. You would propose, then, before you made such an alteration in your tolls to put your lock

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works into a better state of repair?—I think that the general surveyor would be able better to tell you whether we could at once reduce the tolls without waiting for that. If we could get some money we might gradually put the works in order, and we might reduce the tolls even now; traffic would not come on the river all at once; it might be some time in being increased very much. I do not wish it to be understood that we could reduce the tolls sufficiently now without a reduction by the old lockowners, but I thought that if we could get a general scheme between them and ourselves we could do without the discriminating clause which I propose, but I think it would be also desirable to enable the Commissioners to vary their charges on different articles.

81. *Chairman.*] Is there not a general Act giving those powers?—We were advised that we were not able to do so. Some time ago we took the opinion of Mr. Keating then, now Mr. Justice Keating, and he advised us that there were difficulties in the way. He advised the Commissioners in 1845 that under the Act of Victoria they could not reduce the tolls so as to favour the Bristol trader in exclusion of the Reading trader. A great deal of copper ore came up from there at that time, and they said that if we would reduce our toll down to London on the Thames they could bring a much greater quantity; that was on the Kennett and Avon Canal, and owing to the changes since that time that does not arise now.

82. What is the date of the general Act?—The 8th & 9th of Victoria; it was a case laid before Mr. Keating upon that Act.

83. Mr. *Neate.*] What is the date of the opinion?—The date of the opinion is 1845. After stating the general circumstances of the river, the case proceeds: "The Kennett and Avon Canal, running from Bristol through Bath and Newbury, empties itself into the Thames at Reading, from which place the merchandise brought thereon is transported to the Thames and carried on to London through Staines, and is a source of great profit to the latter river. The competition of the Great Western Railway has been very injurious to the Kennett and Avon Canal, and the tolls have been so much reduced that the proprietors of it are proposing to convert it into a railway. The tolls of the Thames and Isis have not been reduced, and the Bristol traders trading along the Kennett and Avon into the Thames at Reading, and from thence to London, represent to the Thames Commissioners that it is impossible to carry on their trade without a proportionate reduction of tolls on the Thames upon particular goods which might enable them to compete with the railway into London. The Thames Commissioners are desirous to encourage the trade into their river from Bristol, and to reduce the tolls upon particular goods coming to them from Bristol if they have the power to do so. By the 8 & 9 Vict. c. 28, intituled 'An Act to empower Canal Companies and Commissioners of navigable Rivers to vary the Tolls, Rates, and Charges on different parts of their Navigation,' powers (which they did not before possess) are given to Commissioners of navigable rivers to vary their tolls. The Act is herewith left for your perusal, and your particular attention is called to the 2d section of it, which provides that all tolls, &c., shall at all times be charged equally to all persons in respect to all boats, &c., of a like description using the same portion of the navigation, and upon all goods, &c., of a like description conveyed, &c., along or using the same portion of the navigation under the like circumstances, and the latter part of this section forbids any reduction or advance in any tolls for the use of the navigation in favour of or against any particular company or person passing along or using the same portion of such navigation without adding the words 'under the like circumstances.' Copper and stone are carried in large quantities from Bristol to London, the same articles may be carried only from Reading to London, and upon those articles only the Commissioners propose to reduce the tolls between Reading and Staines (the only portion of their navigation used by the Bristol and Reading trader), provided they come from Bristol into the Thames at Reading, so that the Bristol and not the Reading trade may be favoured. The question then is, whether the Bristol trader can be said to trade under the like circumstances as the Reading trader, inasmuch as the one carries his commodity from Bristol, and the other only from Reading, and the former may have the power of bringing into the Thames quantities of copper and stone which the other could not procure; or whether the words 'under the like circumstances' must be confined to the portion of the navigation between Reading and Staines, that being the only part of the river belonging to the Thames Commissioners used by either the Bristol or the Reading trader. You will please to advise the Thames Commissioners whether upon this statement they are authorised by the Act of 8 & 9 Vict. c. 28, to reduce the tolls upon copper and stone in favour of the Bristol trader, and in exclusion of the Reading trader." Then follows the opinion, "I am of opinion the Thames Commissioners are not authorised by the Act of 8 & 9 Vict. c. 28, to reduce the tolls upon copper and stone in favour of the Bristol trader, and in exclusion of the Reading trader. The words 'under the like circumstances,' in the 2d section of the statute, appear to me intended to apply to the transit upon and use of the navigation itself, and not to extend to circumstances but remotely if at all connected with it. The more limited construction of those words seems to give effect to the whole section; whereas, it is difficult to perceive how the extended construction can be adopted without neutralising the latter portion of that section. In principle there seems no difference between a reduction in favour of persons trading from a particular town and an alteration to the advantage of individuals trading from a different part of the same town. Upon the whole, I think the reduction suggested not authorised by the Act." We took a subsequent opinion, and Mr. Keating was then of opinion, also, that we could not vary the tolls on different portions of the navigation; but Mr. Phillimore differed in opinion from him; he gave an opinion, which was taken by some private person and sent to us.

84. Mr. *Henry Fenwick.*] That is one reason why you wish for further powers?—Yes.

85. Can you tell me what the main traffic is that is carried in barges through these locks to the upper parts of the Thames?—Coal mostly; timber also to a large extent.

86. Is that coal carried up from the Pool?—Some of the coal is carried up from the Pool. I have a return here from the City Register of 16,000 tons carried, as Mr. Scott of the Coal Exchange informs me, from the Pool.

87. Do you know the cost of transit from the Pool

Pool up to Oxford, say, per ton?—Our tolls would be 4 *s.* 1 *d.* from Staines; from the Pool I am unable to say what it would be, because that is in the Thames Conservancy district; the old lock tolls are about 1 *s.* 9 *d.* more.

88. Between Staines and the Pool there are other locks?—Yes; it is now under the Thames Conservancy Board, and I am not aware of the amount paid there.

89. Sir *Francis Goldsmid.*] Have you not stated that what you wanted was to reduce the toll on some articles?—We should like to have power to do it.

90. But this opinion of Mr. Keating's is only as to reducing the tolls on part of the navigation?—That is so, but I have a subsequent opinion here on the subject.

91. Mr. *Henry Fenwick.*] Do you know how many locks there are below Staines through which barges must pass to the Pool?—Six.

92. Are you aware whether the charges there are of a similar character?—I believe that their charge is much reduced; they have had an Act of Parliament lately.

93. What is the amount of tolls paid per ton on coals which pass through the locks from the Pool up to Oxford?—I should imagine that none pass up to Oxford.

94. But, taking Oxford as about the centre of a large consuming population, will you state the amount of tolls for the locks alone charged upon coal coming from the Pool?—I am informed that the conservancy tolls would be 9 *d*; our tolls would be 4 *s.* 1 *d.*; then the old lock tolls would be 1 *s.* 9 *d.* more; that makes it 6 *s.* 7 *d.*

95. Do you know at all the distance by railway from London to Oxford?—It is 63 miles.

96. Are you aware that considerably under a penny a ton per mile is a usual charge for the carriage of coals upon railways?—I was informed yesterday that they were carried for less than that.

97. So that the carriage of coals from London to Oxford would be less than the tolls that were charged for passing through the locks alone?—That would be so; but it is not the London coal traffic that we look to, it is the coal traffic that comes from the Oxford Canal. I believe that we should have a great deal more coal than is now brought up the river from the Pool (supposing the tolls were reduced) from the north country and the Welsh and Midland districts.

98. Are there not railways communicating between Oxford and the coal districts of the Midland Counties and other districts?—Yes.

99. Are not those railways which communicate with Oxford and other districts in the habit of carrying considerable quantities of coal?—I do not imagine that they bring very much; I am not able to say that.

100. Do you not know that it is shown by a return lately published that from the midland districts of England and from Welsh districts a larger quantity of coal comes to London itself than comes by sea from the northern counties?—I am not aware of that.

101. If those facts are true, may it not be right to consider whether it is not better to rely upon the cheaper and more usual mode of transit for your coal, than to rely upon carrying the traffic on the river, subject as it is now to these drawbacks?—I think it is better that we should have the competition, We should have the rates by railway raised probably if it were not for the competition of the river.

102. You read from a paper just now, in which the Commissioners complain of the competition of the Great Western Railway?—Yes.

103. What you want is to have competition with the railway; is that so?—We know that we must have competition with it. I may state that I am informed that the sea-borne coal brought westward by the Thames was 17,210 tons in 1864.

104. I understand you to say, however, that you could not expect any greatly increased traffic on the Thames through these locks, unless the locks were put into an efficient state of repair and the river deepened?—No, I do not think the deepening of the river is required, but I should prefer that the general surveyor should give evidence upon that.

105. Probably you are aware that it would require a large sum of money?—Yes, it would require a large sum of money.

106. Do you know, in your official capacity as clerk to the Commissioners, what that sum is?—No, I do not; the general surveyor will speak to that.

107. Probably it comes within your official duties to consider how to raise that sum of money?—We were in hopes that if the old bondholders would postpone their claims, and we could show the Government an increased traffic, they would lend us a sum of money if we could show that we would pay them interest for it, that the increased traffic would provide for it.

108. By "the Government," you mean the Public Works Loan Commissioners, I suppose?—Yes.

109. *Chairman.*] Do you think that you could present them with such a security as would be sufficient?—I think we could show that the increase of traffic would be so great as to afford sufficient security.

110. Mr. *Henry Fenwick.*] The security you would offer, would be some expected future increase of revenue?—Yes, by putting the works in order, we believe, that so large a traffic would come on the river, that whatever might be the state of the present bondholders, Government, at all events, would be satisfied.

111. You think that the Public Works Loan Commissioners would lend the money on the security of some hoped for future increase of revenue?—We are unable to get the increased traffic without a loan some how; we cannot without it, put our works in sufficient order to give us the increased traffic.

112. Mr. *Dawson Damer.*] You have said that the coal did not go so far as Oxford. Where do you suppose that the 15,000 tons of coal or more which you mentioned did go?—I only know it by that return, and I am quite unable to say. I think that the general surveyor would be able to say how it was distributed.

113. Mr. *Henry Fenwick.*] Supposing that the Public Works Loan Commissioners are not satisfied with this security, what course do you propose then?—I think the probability is, that the Committee will refuse any longer to act. I do not know what will be the end of it.

114. You do not hope to get any more from the public?—No.

115. Would you then expect the Public Works Loan Commissioners to lend money on a security that the public would not lend on?—I think that we shall be able to show such an increased traffic as would enable us to pay interest on that loan, though

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though the public might not be willing to lend us money.

116. Mr. *Neate.*] Do not you also rely on this fact, that this is a matter of public interest, and that the public may be willing to lend money at a less interest than would be the case if it were for private objects?—It was hoped so, it being an important river; it was thought that the regulating of the supply of water, for instance, was a very important point with relation to the water companies. This is not a company applying to you now; it is a public body.

117. Mr. *Henry Fenwick.*] Is it not just the same in the case of the commissioners of every other public body in England?—I am not able to answer that.

118. Have you had any experience in borrowing money from the Public Works Loan Commissioners?—No.

119. You do not know that they lend money on other than approved securities?—We are hoping to show them that it is a good security in this case.

120. I understood you to say that the public would not lend money on it?—Perhaps the public would not lend on it.

121. Mr. *Hankey.*] Are the powers of the Commissioners quite distinct from that of the Thames Conservancy?—Quite.

122. Are separate and entirely distinct tolls received by the two Boards?—Yes; our jurisdiction goes to Staines, and the Thames Conservancy Board's jurisdiction commences at Staines.

123. There is no arrangement between the two Boards as to the collection of tolls?—No.

124. Is there no system of booking through traffic?—No; there are difficulties in the way, but that is what we hoped to have introduced if we had induced the old lockowners to reduce their tolls. We should propose to try a system of through charges as far as our jurisdiction extends.

125. Is there no community of interests between the two Boards; for example, if the traffic of your part of the river falls off, is it not natural to suppose that the traffic within the Thames Conservancy portion would also fall off?—It would in a great measure, of course.

126. You have no arrangement, however, for saving expense, or giving facilities by through booking, in the same way as railroads have which join one another?—No; but I do not think that there would be any difficulty in making those arrangements. It never has been necessary, because at present at every pound lock we take a toll. We have had no system of through payment; if there were a system of through payment, it would be no doubt easy to arrange.

127. Is there not an inconvenience in the carriage of goods, owing to this necessary stoppage at Staines, and an entirely new system of traffic beginning at that point?—No; I think that there is no practical inconvenience in that way; they go on and pay the tolls when they come to the first Thames Conservancy Lock.

128. Would it not be apparently better that the whole of the traffic should be managed by one Board, either by the Thames Conservancy Board, or by some other Board, so that the general traffic on the Thames should be under one management?—I do not think that that is required; in fact, I think that it would be inconvenient, because a body in London, I think, would be hardly able to manage at Oxford so well as a local body.

129. That is not the case with railroads, is it?—I do not know that it is.

130. You do not think that any general saving would be effected by having one general management on the Thames?—I do not think that there would be a saving; it would be very small, if there were any.

131. Sir *Stafford Northcote.*] Have you ever had any communications with the Thames Conservancy Board as to such arrangements?—No.

132. Have you ever ascertained or considered whether the tolls that are taken by the Thames Conservancy Board are higher than they should be?—I believe that they are very low now.

133. Have you any statement of the amount of your tolls for a series of past years. I think you have not put one, yet, before the Committee?—No, I have not done so yet; I could mention them shortly.

134. Have the tolls been falling off of late years?—Yes. In the year 1845 the tolls were 14,011*l.* 13*s.* 2*d.*; in 1846 they were 11,676*l.* 19*s.* 6*d.*; in 1847 they were 11,183*l.* 13*s.* 6*d.*; in 1848 they were 10,613*l.* 14*s.* 11*d.*; in 1849 they were 9,381*l.* 15*s.* 6*d.*; in 1850 they were 8,499*l.* 5*s.*; in 1851 they were 7,390*l.* 3*s.* 6*d.*; in 1852 they were 6,549*l.* 14*s.* 2*d.*; in 1853 they were 5,372*l.* 5*s.* 11*d.*; in 1854 they were 5,107*l.* 7*s.* 4*d.*; in 1855 they were 4,856*l.* 15*s.* 8*d.*; in 1856 they were 4,829*l.* 10*s.*; in 1857 they were 4,185*l.* 4*s.*; in 1858 they were 3,592*l.* 19*s.*; in 1859 they were 3,888*l.* 8*s.*; in 1860 they were 3,698*l.* 8*s.* 8*d.*; in 1861 they were 3,906*l.* 2*s.* 4*d.*; in 1862 they were 3,341*l.* 6*s.* 2*d.*; in 1863 they were 3,316*l.* 11*s.* 6*d.*; and, in 1864 they were 3,097*l.* 6*s.* 8*d.*

135. With the exception of one or two years of partial rises that shows a continuous and very large decrease, does it not?—Yes.

136. Has there been any decrease or alteration in the rates of tolls during that time?—No; they have remained the same, excepting that we have taken off 10 per cent.

137. When did you take off 10 per cent.?—In the year 1856; on the 1st of July 1856 a reduction was made of 10 per cent.

138. Mr. *Neate.*] What was the effect of that upon the traffic?—£.4,829 was the amount which we received in 1856, and in 1857 it was 4,185*l.*

139. In the year when the reduction took effect there was a still further reduction in the amount received?—Yes, in the following year there was.

140. Sir *Stafford Northcote.*] Have you any account of the disbursements in 1845?—The disbursements in 1845 were 14,469*l.*, but I observe that amongst that there were Exchequer Bills purchased for 2,063*l.*, so that there was only 12,000*l.* in reality disbursed.

141. Did that include payment of interest?—Yes.

142. Perhaps you could put in a table showing the total amount of the disbursements, side by side with the total amount of the receipts, and at the same time distinguishing the payment of interest and any other monies?—I will do so.

143. Can you tell us what the amount was that was received by the lockowners of the old locks, at the time they were taken in hand?—I am unable to say that.

144. Could you ascertain it?—I could not ascertain it.

145. Can

145. Can you tell us what the receipts upon the old locks have been during the years of which we have been speaking, from 1845 downwards?—No.

146. You gave us the receipts for the year 1864; could you give them for any previous years?—I have not any table of them.

147. Would there be any means of ascertaining that for former years?—I do not think that it would be possible; they keep their own books; we have got the current year.

148. Has the question ever been considered whether it would be desirable to propose some composition with the lockowners, and to pay them a fixed sum?—That was considered, and it was proposed that we should rent the locks of them.

149. That was declined, was it?—It was not declined by the majority, because the majority were willing to fall into it; it was only declined because two or three were against it.

150. Mr. *Neate.*] Is there any canal in connection with the Thames?—The Oxford Canal, joining it at Oxford.

151. Have they made any proposal to you to contribute to the keeping up of the navigation of the Thames?—They are willing to assist in every way they can.

152. Could you, by going back to the accounts, ascertain what was the income of the Thames Commissioners 80 years ago?—No, I have not those accounts.

153. Is there no way of getting at them?—The accounts are presented to Parliament annually.

154. And if we could get at those, we could get, through those, the income of the old lockowners at that time; there would be the same proportion, would there not?—There would be the same proportion.

155. The present proportion is 3,097 *l.* and 704 *l.*?—Yes.

156. There would be the same proportion previously?—Yes.

157. Mr. *Yorke.*] Do I rightly understand you to say that 14,000 *l.*, in the year 1845, was the maximum?—No; we had over 16,000 *l.* in the year 1840.

158. Was that the time that the Great Western Railway was being made?—Yes, and a great quantity of materials was brought down the river for that purpose.

159. Mr. *Neate.*] Can you tell us what is the age, generally, of the new navigation locks?—About 80 years old; from 80 downwards.

160. Are they mostly of the same age?—Yes.

161. *Chairman.*] Many of the barges that go upon your navigation above Staines have travelled over the first district of the Thames navigation which is under the Thames Conservancy, have they not?—Several of them go down into the Pool, and come up too.

162. Then if your navigation were to stop, the Conservancy Board would lose so much of their traffic as was going above Staines?—Yes.

163. They have, therefore, an interest in the maintenance of your navigation?—Yes.

164. At first, all the Thames, as we have been told, was under one body; do you happen to know why the first district, from London to Staines, was taken from the Thames Commissioners and put under the Thames Conservancy?—I do not know that; I know that the 14 Geo. 3, c. 91, was the Act which took it away from us, but I do not know the reasons why it was done.

165. Sir *Francis Goldsmid.*] Have you ever looked at the Act, to see whether it gives any reasons?—I do not know positively whether it does not; my impression is that it does not give any reasons.

166. Mr. *Hankey.*] If you were not able to borrow this money, what do you think would be the probable result to the Thames navigation generally above Staines?—The works must go into decay entirely.

167. And supposing the works were to go into decay, what would then result?—I imagine that the old lockowners and millowners must in some way keep them up, to have their head of water.

168. Would they be compelled to do so by any Act of Parliament?—No, not by any Act of Parliament, but for their own protection.

169. *Chairman.*] I suppose that in floods also the results would be serious?—In case of floods it would be a serious thing for the country near the river.

170. Mr. *Hankey.*] Would it be a question in which the public generally were interested, or only millowners and those accustomed to depend on the Thames for the conveyance of goods to their particular locality?—I think that the public generally are very much interested in the question, for the water supply of London comes principally from us.

171. But the water supply for London would equally come down the Thames, would it not, whether there were any works or not?—I imagine that our works have a tendency to increase the supply of water in summer, when otherwise the river would be dry; by penning it back.

172. Mr. *Dawson Damer.*] But the works that have been constructed have not been so with any idea of protecting the water supply of London, but merely for the purposes of navigation, I presume?—Yes, merely for the purposes of navigation.

173. Supposing that the navigation was given up, the water supply of London would equally come through the valley of the Thames, would it not?—It would equally come certainly; but I imagine that much more water would come in winter time, and much less in the summer.

174. *Chairman.*] Would it be necessary for the supply of London to make some artificial dams or dykes, by which the supply would be rendered more regular?—That is my impression.

175. Mr. *Dawson Damer.*] Would these weirs be sufficient without any locks at all?—Something must be done with them; either weirs made there, or something else.

176. Colonel *Knox.*] Supposing the locks to be abandoned and to get out of thorough repair, would there not be a great danger to all the property in cases of sudden floods on the breaking up of a frost?—I think so.

177. Mr. *Neate.*] If the locks are given up the old lockowners must open their weirs?—I think so.

178. Sir *Stafford Northcote.*] How do you account for the great diminution there seems to have been in the disbursements of late years, coincidentally with the diminution in the receipts; you have had more locks to keep, have you not?—Not more; the same number; the diminution has been partly in salaries. My father's predecessor's salary was 600 *l.* a-year; my father's was 400 *l.*

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400 *l.*, which he voluntarily reduced to 200 *l.* I had 200 *l.* on election, which I have myself reduced to 150 *l.*; and the other salaries have been reduced in the same proportion.

179. Have you got any account of the disbursements of that year, 1845, in the same detail as you have the accounts of 1864?—Yes.

180. Perhaps you can tell us what the different items were; what was the amount of salaries in 1845?—Salary to officers, 870 *l.*; that is in lieu of 450 *l.* now. Then salaries to pound-keepers, 1,283 *l.* 5 *s.* 6 *d.* Then there was also an item for poundage for collection, of 150 *l.*, which is part of the salaries to officers in fact; then towing-path rents, 272 *l.* 11 *s.* 4 *d.* I should state that we have reduced those towing-path rents. Rent of wharves, 91 *l.*; and then there is a sum of purchase-money, 35 *l.*, for a piece of land, and compensation for the land, 25 *l.*; then remission of tolls on sunk boats, and other damage, 23 *l.* Repairs 1,620 *l.*; the repairs were really 4,101 *l.* Surveys and committees were 279 *l.* 18 *s.*, and the sundries were 674 *l.* 17 *s.*

181. The 4,000 *l.* for repairs included the timber and ironwork, I presume?—Yes, the timber alone was 1,926 *l.*

182. That is included in the 4,000 *l.*?—Yes.

183. Were there any works being made at that time?—I think there must have been; I am not able to say.

184. Can you account for the great difference between the expenditure then and the expenditure now upon some of those items?—The only reason that I can give is that I imagine that they were put then in an efficient state of repair.

185. Perhaps in the account that you are going to give us of the total amount of disbursements you would distinguish the chief heads so as to show where the difference has been?—Yes.

186. Mr. *Baring.*] Could that be given in districts; that is to say, comparing the revenue in tolls and the expenses in tolls in the district, say from Staines to Reading, Reading to Oxford, and above Oxford?—I could not do that now; it would be impossible, I think.

187. The account showing, I mean, which part of the river pays for keeping the locks in proper repair, and which does not?—I do not think that I could get that out in detail, but I am prepared to state generally that above Oxford it does not pay, and that below Oxford it would pay if put into proper repair.

188. Is there no canal navigation now connected with the Thames except the Oxford canal?—There is the Oxford canal, and the Wilts and Berks at Abingdon, and then the Thames and Severn comes in at Lechlade, that brings hardly any traffic at all.

Mr. James Castle, called in; and Examined.

Mr. *J. Castle.*

189. *Chairman.*] What is the office that you hold?—I am the General Surveyor and Receiver to the Navigation Commissioners.

190. How long have you held that office?—Two years and a few months.

191. Can you tell us what is the state of the works on the navigation under your superintendence?—I can say, speaking generally, that the whole of the works are in a state of decay, that many of them are highly dangerous, and that it has been almost a miracle that many of them stood during the last winter floods.

192. Are the works at the present time, even supposing that they get no worse, sufficient for the purposes of navigation?—Not at all.

193. Will you state why?—In the first place, the gates and weirs are all so leaky that they do not sufficiently store the water, and in the next place the gates of many of them are in such a bad condition that they can hardly be opened.

194. Are they safe for the passage of boats?—They are not safe.

195. Is there any danger to the public in other ways from their being left in that state?—Very great in this way—that although the public, I believe, have not any right to use the towing paths, or weirs and bridges, yet they have been accustomed for a great many years to use as footways the towing paths and bridges, and many of those bridges are in a dangerous state.

196. Dangerous, you mean, to the public passing over them?—Dangerous to persons passing over them from their rotten and insecure state.

197. Mr. *Neate.*] What bridges do you refer to?—I mean the stages of the locks and weirs, and the towing-path bridges, which are very numerous.

198. *Chairman.*] With regard to the bed of the river itself, have you any remark to make upon that; is that sufficiently kept open for the purposes of navigation?—It is not. In consequence of the locks being in their present dilapidated state we get scours and the bed of the river silting up in many places, which would not be the case if the water was properly penned and under control; and the consequence of the bed of the river not being properly cleansed and kept open is that the floods do more damage and spread more over the land than they would if the bed of the river was open.

199. The bed of the river not being sufficiently open, it does not afford a sufficient channel to get rid of the flood water?—Exactly so; and I may state that the whole of the weir tackle is drawn out in winter time to allow the water to escape. We attempt to give the flood water every facility, and only to store it when it begins to fall off in the spring of the year.

200. But the bed of the river itself must be kept open, in order that the flood water should flow off freely?—It is exceedingly necessary.

201. That you say is not done?—That is not done. Where the navigation is kept open, and where barges are constantly passing, the bed of the river is in a better state than where the navigation has ceased. The part between Cricklade and Lechlade is now almost grown up, and a part above Oxford, which 20 or 30 years ago was navigable, is now so grown up, that two persons in a flat-bottomed pleasure-boat could not go up it in the summer time, in consequence of the bed of the river having silted up.

202. Have the Navigation Commissioners undertaken, or declined to undertake, the works which

which you, as surveyor, have recommended?—They have no funds to do them.

203. Have they no funds to effect repairs, so as to keep things going without constructing any new works?—At the present moment, I believe, I am correct in stating that they have literally no funds whatever for that purpose.

204. You find that they cannot keep in proper repair the old works?—Yes, that is so.

205. Therefore new works are out of the question?—Yes.

206. Mr. *Neate.*] As a matter of fact, you have discharged all the men under you, except the pound-lockmen?—Yes.

207. *Chairman.*] What chance is there of getting new funds from any place on the river; what are the difficulties that have to be overcome before new funds can be hoped for; I mean with regard to the works?—The works are not suitable for additional traffic to be carried on, and, in addition to that, they are now in such a decayed state that very few barge-owners will work their barges more than is absolutely necessary for their particular trade; for instance, most of the barge-owners are coal merchants or timber merchants, and work their barges for their own traffic, but there is no inducement for them to act as general carriers. The whole of the general carrying trade has fallen off, as a trade, I believe. A few boats from Reading take flour and timber for other people; but, generally speaking, the whole of the trade carried on is by traders in their own barges.

208. Mr. *Neate.*] You have spoken about the general state of the locks; do you recollect a letter being received last year from the authorities of Eton College, saying that they should hold the Commissioners liable for any loss of life that might happen?—Yes, in consequence of the state of the lock at Romney, opposite Eton.

209. Has anything been done to that lock?—Some repairs have been done, but it is still dangerous.

210. Sir *Francis Goldsmid.*] What is the danger?—The danger consists in the fact that the lower work has been blown up by the rush of water, and the whole of that might go away suddenly at any time.

211. *Chairman.*] If I understand you right, there is no hope of an increase of revenue without an increase of traffic, and there will not be an increase of traffic while the works are considered so insecure as they now are?—Exactly so.

212. Does the want of power under their present Acts prevent the Commissioners from doing what is necessary in your opinion for securing an increase of traffic?—I believe so; in fact, in many cases I can say positively that it is so. For instance, the old system of levying a particular rate per ton at every pound lock works badly; and, in addition to that, the rates vary at almost every pound, so that a man not accustomed to the river could not on starting from a certain point possibly calculate the cost of his carriage.

213. Sir *Francis Goldsmid.*] As far as the Commissioners are concerned, do they now take all the tolls payable to them for a particular voyage at once?—No.

214. Could they not do that?—I believe not; but if they could, the rate which they have power to levy now is very much too high for the present competition, and in some cases, when boats are partly loaded, the rate taken by the old lock-owners is very much higher than that taken by the Commissioners.

215. *Chairman.*] How many pound locks are there between Oxford and Staines?—Thirty.

216. They are all necessary for the navigation, I presume?—Yes.

217. How many of them are in connection with mills and waterworks?—Twenty-five are in connection with 29 mills and waterworks.

218. What waterworks are those, and what places do they supply?—The principal waterworks are those at Romney pound, which supply Windsor Castle and the royal farms and gardens and Frogmore. They are now kept up, and form one of the best establishments of the kind in England, and are kept up entirely by the attention of one man. They derive their water-power from the head of water kept up by our navigation, and by the dilapidated pound lock of which I spoke before.

219. That water-power is dependent on the head of water kept up by you?—Yes.

220. Mr. *Neate.*] Do you keep up that head of water by a dam?—Yes.

221. *Chairman.*] It is kept up now by your navigation weir and the pound lock?—Yes, imperfectly.

222. How long have these pound locks been made?—In the lower district they have been made about 40 years, and in the upper district from 40 to 70 years.

223. Mr. *Neate.*] What do you call the lower district?—The district from Maidenhead to Staines.

224. *Chairman.*] Could you state which of the locks and works require immediate attention, and can you give us an estimate of the approximate cost of reconstructing and repairing them?—There are seven pound locks which require to be immediately rebuilt for the purposes of the navigation; there are nine which require immediate repairs to the gates, six which require immediate repairs to sheeting, and nine which require immediate general repairs; making 31 altogether. The sum which I think necessary for immediate repairs is 22,000 *l.*

225. That is on the whole navigation from Staines to Lechlade, is it not?—Yes.

226. How many locks are there between Oxford and Lechlade?—Five.

227. The greater portion of the repairs and new works are required between Oxford and Staines?—Yes; the locks are in a worse state in the district above Oxford; but I do not consider that they are of so great importance as the lower part, in consequence of the traffic there having fallen off very considerably.

228. I have heard it stated that the depth of water in the locks is not sufficient over the sills of the locks to admit of barges passing, which would be capable of carrying a profitable cargo; is that so?—Not that I am aware of.

229. Then it would not be necessary, you think, to embark on that expense in order to enable the navigation to be more remuneratively worked?—Not at all; and I speak positively, for this reason—that those sills were in their present state when the river traffic was at its greatest height, and then barges of 80 tons and upwards, and canal boats of 30 tons, passed over those sills.

230. If there is to be any traffic on the river now, to compete with railways, it may be necessary to have a differently constructed barge, in order to carry a cargo with profit?—It may be so.

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231. Then the old sills would not do, perhaps, for the new barges?—If the works were put in proper repair, the position of the present sills would be adequate, but in consequence of the leakages throughout the length of the navigation, it occasionally happens that the sills are too high.

232. Sir *Francis Goldsmid.*] There is too little water over them, you mean?—Yes.

233. Colonel *Knox.*] Supposing steam to be adopted for the towing of barges, would the locks in their present state be adequate to the case?—Not at all; but I contemplate that the moment our works are put in repair we shall have steamboats and tugs working on the river. In the present state of our locks it would be highly dangerous for steamboats to work through them continually.

234. Sir *Frederic Smith.*] For twin boats to go, you mean?—Yes.

235. Is not there much less undulation in the other way?—Very much less.

236. *Chairman.*] Can you give us any information as to the present traffic, and what might be expected in future?—The present traffic is confined almost entirely to the carriage of coals and timber. We get coals from the inland collieries in the upper district, we get the seaborne coals from London in the lower district; timber also is brought up and down; English timber downwards from the neighbourhood of Reading and Oxford, and foreign timber upwards from London; but at one time a large quantity of groceries, iron, corn, slates, and other heavy goods, were carried by the river, the whole of which is now carried by the railways; I think, if it is necessary, that witnesses might be called, grocers, and corn and other merchants, who would show that they would be glad to have an opportunity of bringing all their goods by the river; they would load their goods in the docks, and would be able then to get them, by competing with the Great Western Company, carried at a cheaper rate than they do now.

237. Mr. *Neate.*] Have you made any inquiry, or taken into consideration, how many villages there are which are nearer to the locks than they are to the railway?—I have not; I know that generally, but I have not made any estimate.

238. There must be a good many villages near the Thames which are considerably nearer some lock on the Thames than they are to a railway?—Yes.

239. *Chairman.*] You have given us, I think, an approximate estimate of the amount which you consider necessary for setting the navigation in order?—The sum I think necessary for immediate repairs is 22,000*l.* in round numbers.

240. That is what is immediately necessary?—Yes. I did not quite finish my statement as to the number of works. There are others besides the pounds; there are eight weirs more or less dangerous, and there are the bridges and the towing-paths throughout.

241. Sir *Stafford Northcote.*] Are you able to give us any facts which would show the interest which the millowners and other persons have in the maintenance of your works?—Generally, I can.

242. Could you put it into any shape that would be reducible to a money standard?—I am not aware that I could without an immense deal of labour, in ascertaining the construction and trade position of the mills, and their water power.

243. Speaking generally, what should you say was the interest which millowners or other private persons have in the maintenance of these 30 locks which require to be rebuilt or repaired?—The very existence of their mills depends on them.

244. So that in case those works were abandoned, it would be necessary for the millowners, for their own benefit, to maintain works of something of the same character?—Yes.

245. Do you suppose that they could maintain them independently of the navigation more cheaply than they could with the navigation?—I believe that they would be only too glad to do so, independently of the navigation; but seeing the present way in which they manage the water, and the damage they might do, it would be very imprudent to allow them to possess the power.

246. Do you suppose that they could be placed under restrictions by Act of Parliament which would prevent them damaging the navigation, at the same time giving them the control of these weirs and locks?—I believe not.

247. You do not think such precautions could be devised?—I think their own interest is so great, that unless some correspondingly strong body had more control than they had, the consequences would be very serious to the adjoining districts.

248. Do you suppose that the millowners now contribute to the maintenance of these works at all in proportion to the benefit which they derive from them?—Not at all; they take dues at the pound locks, and contribute nothing.

249. Mr. *Neate.*] They contribute nothing whatever, but raise a revenue from them?—Yes.

250. Colonel *Knox.*] Do I rightly understand you to say that the millowners at the present moment contribute nothing to the locks and weirs in their immediate vicinity?—I do say so with reference to the pound locks.

251. Is it not to your knowledge that, though they take the tolls, they are obliged to keep in repair those locks?—Their own locks they are, but not the pound locks.

252. Taking the Marlow lock, do you mean to say that the millowners there, Messrs. Parslow & Wright, the great paper-makers, contribute nothing to the repair of that lock?—Not a penny to the repair of the pound lock; but, on the contrary, they took last year from our navigation 31*l.* 4*s.* Millowners take this money under the Commissioners' present Acts of Parliament as compensation for the loss which they were supposed at the time those Acts were framed to be likely to sustain from the barges not passing through their old locks; but, as a matter of fact, the millers have been gaining considerably. Under the old system it was quite possible for four boats in the day passing through an old lock to utterly destroy the working of the adjacent mill. Since our locks have been introduced the water is constantly penned up, and now the passage of the boats, in most cases, barely sinks the water; so that while the old lock tolls are a loss to the Commissioners, the gain in water-power is very great indeed to the millers, and they have the money gain besides.

253. Do you acknowledge that lock to be an old lock or a new lock?—The pound lock at Marlow is a new lock, but the weir which passes from

from the pound lock up to Mrs. Parslow's house belongs to the paper-mills; that, the owners of the mill repair; that is an old lock.

254. They take the tolls for that lock, do they?—Yes; originally the boats passed through some portion of that weir.

255. And the boats could not do so now?—No.

256. *Chairman.*] Will you furnish us with a written statement of the separate heads of the expenditure that you think it would be necessary to undertake in order to put the works in a proper state to keep up the navigation, and to keep up the present income?—Yes.

257. I think that you mentioned that there was a hope of a larger revenue for the future from an increased traffic, but that new works would be necessary to secure it; will you hand in an estimate of what you think would be required for that?—I am not in a position to do so now, but I have a survey partly prepared of the whole of the works, which I shall be in a position to hand in, perhaps, at your next sitting.

258. You have stated that the sum total which you consider it necessary to raise now for immediate purposes is 22,000 *l.*; does that cover everything that is necessary now?—Yes.

259. Sir *Francis Goldsmid.*] Does that include new works?—It includes some new works; I think that perhaps another 10,000 *l.* would entirely complete the navigation.

260. Mr. *Neate.*] One of the difficulties in the use of a steam-tug being that it requires the opening of the lock twice, have you considered the expediency and the expense of enlarging the lock so much as to take both the tug and the barge?—Yes, and I consider that the extra cost would be thrown away.

261. Could you say, from memory, whether between Culham and Reading there are not three or four considerable towns, which are not very near a railroad, and which are upon the river, for instance, Wallingford; there is no branch railway to Wallingford, is there?—That is so.

262. So far as they depend upon the railway they would have to send how many miles?—Three and a half or four miles.

263. Dorchester is close to the river, is it not?—Yes.

264. And how far from the railway?—That is four miles from the railway.

265. Then Benson is about the same, is it not?—Benson would be five miles from the railway at least.

266. That is on the river?—Yes.

267. Do you think of any other town in the same position?—There is Marlow.

268. Is there not a railway to Marlow?—To Marlow Road only.

269. *Chairman.*] You want to raise some 30,000 *l.*, that is one thing which you think necessary in order to restore the navigation to its proper state?—Yes.

270. What change would you make in the powers which the Commissioners exercise?—I think that that is a matter which requires very great consideration, and I do not consider myself competent to speak thoroughly upon it. Several points are subjects for legal consideration, but under any circumstances the Commissioners ought to have power to make special rates for the carriage of goods, to enter into contracts with traders, and to do as I have ascertained is done in the part under the Thames Conservancy, namely, to keep quarterly accounts with the traders.

271. It has been mentioned, also, that the mill-owners, for their own purposes, have power to let the waters off without the authority of the Commissioners?—Yes.

272. Does that interfere injuriously with the navigation?—Very seriously.

273. Do you consider that a power which they should not be able to exercise now?—I do.

274. Sir *Frederic Smith.*] Would not such a change interfere seriously with the millowners?—It might; but a system might be adopted which would answer the purposes of the mill-owners and the purposes of the navigation too. If it is a question of the share which the navigation should have, and the share which should fall to the millowners, I believe that if the Commissioners sent an engineer and the millowners sent an engineer, to consider the question together, an understanding might be arrived at in that way.

275. Supposing a sudden repair to be needed, would you require that the millowners should send to the Commissioners for permission?—Yes, I should; the barges are tied up during the night frequently, and the millowners, without notice, draw off the water, and there is danger of the barges being left high and dry.

276. Are they undershot or overshot mills?—There are about two breast mills, and the others are undershot.

277. Supposing that there is a case for immediate action, what is the millowner to do?—I do not anticipate that there would be any difficulty in the millers giving immediate notice to the pound-keepers at their own mills, and above and below, and the boats might be stopped; that, in most cases, could be done in about two hours.

278. Then you would give power to the pound-men to grant permission, would you?—I speak of that as an emergency. I think that the permission should be obtained from the managing person, whoever he may be.

279. *Chairman.*] With regard to those who have fishery rights, do they exercise their power of letting the water down injuriously to the navigation?—Very injuriously indeed.

280. What would you do with them?—I would abolish their fishing rights at weirs entirely.

281. Mr. *Neate.*] The abolition of present fishing rights would very greatly improve the navigation of the Thames, you think?—Yes.

282. Have you any idea what is the present market value of the mills on the Thames?—I have not. I have been able to ascertain the value of one mill, the name of which I am not at liberty to mention, and I am told that the value of that is 20,000 *l.*

283. Sir *Francis Goldsmid.*] Do you mean that that is the value of the mill and all its machinery?—The mill and the water-power.

284. For what are most of these mills used?—For the making of paper and the grinding of flour.

285. As far as grinding flour is concerned, have you ever taken into your consideration the question whether, in fact, steam would not do the thing much more efficiently, and at less cost, than the water?—I feel sure that water would do it at less cost.

286. Not the same amount, however?—No.

 287. Have

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287. Have you never heard of a steam mill destroying all the trade of the water mills of the neighbourhood?—That is quite possible, because a steam mill could do so much more work.

288. Mr. *Neate.*] But not so cheaply, you say?—Not so cheaply.

289. *Chairman.*] Can you state to us what powers you think the Commissioners should have which they do not now possess, in regard to the management of the navigation?—I believe, in the first place, that, both for the navigation and for the sake of economising the water, the Commissioners ought to have power to economise every drop; that the millers should have just their proper proportion; and that the weirs should never be drawn for fishing purposes; but if it is necessary to take fish with the machinery now used, that that machinery should be placed in a part of the stream where no waste of water would be occasioned. Then, in addition to that, I consider that the present system of water marks is not a good one; the present system of high-water marks is good as between the millers and the landowners, but not good as between the millers and the navigation.

290. Sir *Stafford Northcote.*] Will you explain what you mean by that statement?—At each of our pound locks we have a mark, which is called our high-water mark; we have another, which is put very low, which is a low-water mark. If the millers allow the water to rise above the high-water mark they are liable to a penalty, because it damages the land; when it goes below the low-water mark, they are again liable to a penalty, because it is then supposed to damage the navigation.

291. Sir *Frederic Smith.*] Who has the power to fix those marks?—The Commissioners.

292. What is their datum?—I do not know what it has been. The high-water mark is almost a flood mark, and in the summer time the water seldom reaches that mark except after heavy rain. The bargemen buy additional water in the upper districts, and that water reaches the high mark, so the effect is that though the men have been some miles and paid for more water, when they come to the mills the millers will not allow it to pass.

293. What would be the remedy for that state of things?—To compel the millers at times to draw and allow the water to run for a certain time, and in addition to that to place another mark which should be a summer high-water mark, and then it would be necessary perhaps for the county police or some other persons to look after the marks and enforce the penalties.

294. *Chairman.*] These millowners are sometimes Commissioners, are they not?—Yes, but they have no power as Commissioners to interfere with the setting of the water-marks.

295. Mr. *Neate.*] The Commissioners as a body have power to set the water marks?—Yes.

296. You mean that as millowners they have no power to do it?—Yes.

297. *Chairman.*] What other powers do you think it necessary to vest in the Commissioners for the management of the river?—I think perhaps that with regard to the sewage question, when it is in a more advanced state than it is in at present, the Commissioners might have some power over that.

298. In regard to the navigation, what other powers would you give the Commissioners?—The power to dredge the river; at present, the dredging of the river is done by any persons who think that they can sell the gravel; the Commissioners have no power to prevent them unless they are doing what is a palpable injury to the navigation; but those persons do it so indiscriminately and entirely without supervision, whenever they choose, that they often do injury which may not be detected.

299. Mr. *Neate.*] They make pools in various parts, do not they?—Yes.

300. *Chairman.*] You would enable the Commissioners to do the dredging, and to sell the ballastage?—Yes; I believe they might get a very handsome revenue from that source.

301. Mr. *Dawson Damer.*] After all, dredging deepens the river, does it not?—Yes.

302. Mr. *Neate.*] They dredge, do they not, for their own convenience now, and not for the convenience of the navigation?—Yes; they dredge frequently under the banks, and allow the banks to fall down; and they dredge deep holes and close to bridges, where it is necessary to move the barges with poles.

303. Mr. *John Reginald Yorke.*] What is the condition of the Thames Canal at Cricklade?—I ascertained last week that some of its works are very leaky; but the whole of the heavy goods to Lechlade are still brought down by it.

304. I understood you to say that in the river above Oxford it was impossible for the traffic to pass in the summer?—That is the case in one place.

305. The communication has been interrupted in that case between the Severn and the lower part of the Thames?—In the lower part of the Thames near Oxford, not between Lechlade and the upper part. In the cut immediately below Lechlade pound the water-way is now reduced to 13 feet only in the width, in consequence of the river having been neglected.

306. Has the value of the traffic between the Severn and the Thames diminished of late years in consequence of that state of things?—I believe not to Lechlade; but the Thames Commissioners have no pound above Lechlade, and they derive no benefit from that part consequently.

307. *Chairman.*] Is there anything else that you would like to have done in the way of legislation for the protection, as it were, of the navigation?—Yes. There is another serious question, in the districts above Oxford; there, for a good many miles, farmers have lately been throwing up embankments close by the side of the river, so as to confine the whole of the flood water to the river channel; and if that is continued it will be, I imagine, a serious thing to Oxford and the towns below, as the flood-water will be brought down very rapidly.

308. Does that fact interfere with the navigation?—Yes, very seriously; it would be impossible for boats to go up against the velocity of such a flood as would travel between those banks.

309. Would you give the Commissioners a power of supervising or consenting to those embankments, and provide that that should not be done without authority from the Commissioners?—Yes.

310. Mr. *Neate.*] The neighbouring proprietors now assume to themselves the right of making

making the embankments just as they like; is that so?—Yes.

311. Sir *Frederic Smith.*] What is the nature of the embankments?—They are simply banks of earth thrown up three feet high, and, in some cases, eight or ten feet wide; but they are made as high and as wide as the fancies of the parties dictate, with materials within a convenient distance.

312. Encroaching on the river, do you mean?—Not on the width of the river, but on the flood space; for instance, in one place the floods spread formerly over a space of from three to four miles wide; now, at that point, the flood has been brought within 50 yards. In one case, the farmers have brought the banks so close, that there is only about 35 feet of waterway for the floods.

313. *Chairman.*] On what part of the river has the navigation wholly or partially ceased?—From Cricklade to Lechlade, and above Oxford, for a distance of three miles perhaps.

314. The bed of the river cannot, in fact, carry off the flood-water?—It is utterly impossible.

315. What do you propose to do there?—I propose that there the Commissioners should have the power and the means to keep the river properly dredged.

316. Mr. *Hankey.*] What do you mean by their having the means?—I mean that they should, from some source or other, obtain a revenue for that purpose.

317. You have not contemplated, perhaps, from what source that revenue should be derived?—I think that it might be a charge upon the lands.

318. Mr. *Neate.*] What is the canal that communicates at Oxford with the Thames?—It is called the Oxford Canal, I believe.

319. What is the other terminus of it?—It is in connection with several canals which work into the inland collieries.

320. Do you happen to know whether the traffic on that canal has been increasing of late?—I believe it has.

321. The value of the shares, which had got very low, has lately increased, I believe?—Yes.

322. Do you know how much?—I do not know that; but the gentleman who has the management of the canal will be able to state that.

323. Mr. *Hankey.*] Do you happen to know what are the powers of the Thames Conservators with respect to dredging?—I believe that they have power to dredge and to sell the ballast; and I have been told that they derive a large income from that source.

324. Do you think that a similar kind of power ought to be given to the Commissioners?—Yes.

325. When you spoke of there being danger at these locks, did you mean danger to life, or danger to the nearly-adjacent property?—I mean both.

326. Have you ever considered what would be the effect of these locks being allowed to go to entire ruin, and the water left to flow in its natural channel?—I have.

327. What do you think would be the effect?—I think that the effect would be that the Thames, in the low-water times in the summer, would be reduced to a mere ditch in many places.

328. Do you think that it would affect the supply of water which now comes through the natural valley of the Thames towards London? It would affect the supply at London very materially.

329. Are the dams then that are formed at the locks intended for any other purposes than those of mere navigation?—For the purposes of navigation and for maintaining the head of water for the mill-power.

330. But if the navigation was allowed to be neglected the same quantity of water would flow down, would it not, only perhaps in a more unequal manner?—It would come down in a great volume in flood time, and of course in a dry summer the volume would decrease. In the spring we should have the whole of the spring water run down, and after that time a sluggish current only, not sufficient to cover the bed of the river.

331. Then it would affect the nature of the supply of water which now comes to London?—Very materially.

332. It would therefore affect the water companies who now bring the supply and derive their profit from it?—It must necessarily do so.

333. Would it not appear natural that the duty should devolve on those companies of taking care of the Thames?—One would think so.

334. I understand you that the millowners and bargeowners do not pay a sufficient sum of money to keep the Thames in repair?—That is so.

335. If the locks are not kept in repair, the result will be that the Thames will cease to supply water for these mills, and they will either get steam, or cease to exist?—Yes.

336. And the traffic will either take the course of railways or canals, or some other means; it will cease to go by the Thames?—Yes.

337. Then the only service that the Thames would materially render, would be the supply of water for London and other towns?—Yes.

338. And for commercial purposes?—Yes. I should say also that in low-water times the injury in regard to the land, and to the supply of water for cattle, would be very serious.

339. As far as the mere supply of water to London goes, do you see any objection to calling upon the water companies, who depend for their entire income upon this source of water supply, to consider what steps ought to be taken for their own protection?—I have never considered that question.

340. Mr. *Dawson Damer.*] Are you aware that the water companies pay 11,000*l.* to the Thames Conservancy Board for the water they use?—I was not aware of that.

341. Mr. *Hankey.*] The water companies, you think, have a direct interest in keeping a uniform supply of water in the Thames?—They must have.

342. And the other parties interested; are they millowners and those who use the Thames for barge purposes?—Yes, and the landowners.

343. Is the present set of Commissioners, in your opinion, a good body for managing such a business as the superintendence of those 100 miles of river?—As a matter of opinion, I should say that the present body of Commissioners ought really to be able to manage the river; they are selected from persons residing along the banks of the river for the whole distance, and one would imagine that they had a more direct interest in

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the question than any other persons except the millers.

344. Have you considered the effect of a railroad being managed in that way by the superintendence of a number of proprietors of lands through whose land the railroad passes?—No. There have been some misapprehensions on that point of the management of the river by the whole body of 800 Commissioners, and many misstatements. The river is divided into districts; there are five districts under the management of the Navigation Commissioners. In each district, at a particular day in the year, the Commissioners meet and elect three gentlemen from their district to form a managing committee, so that really the business of the districts is managed by 15 people, and not by 800.

345. Is it not desirable, in a business of that kind, to have some uniformity of management which can hardly be consistent even with a body of 15 gentlemen taken from all parts of the river; is it not a business which requires an intelligent management of persons who really do nothing else; some Board expressly appointed for that purpose?—That I cannot say.

346. Can you, for instance, yourself obtain the assistance and orders to carry out what you think is necessary for the effective management of such a business?—Yes; I have never experienced any difficulty except the entire deficiency of funds.

347. Do not you think that it may be owing, perhaps, to the want of good management that there is such a deficiency of funds?—That I am not prepared to make any statement about; I can simply say that since I have been connected with the Thames I have always found the Committee paying every possible attention to their duties.

348. The Commissioners always receive income enough, I suppose, to pay for the expenditure of the staff, yourself and others whom you employ?—No; at the present time there is not enough for that; the men whom I have been in the habit of employing are all discharged.

349. Mr. *Yorke.*] There is no one now but yourself and the secretary?—And the pound keepers.

350. *Chairman.*] You stated that the Commissioners elected a Committee, and that really there were 15 instead of 800 managing the navigation?—Yes.

351. But the resolutions of those committees have to be confirmed by the general body?—Yes.

352. Therefore the general body might swamp them and overturn them after all?—Yes; and I think that that is one of the points which in a new Act should be altered.

353. Sir *Francis Goldsmid.*] Do they ever in practice refuse to confirm the resolutions of the committees?—I do not recollect any case in my time, but I can conceive of it as quite possible.

354. Mr. *Hankey.*] If the Commissioners were able, either under any Act of Parliament or through private sources, to obtain such a sum as you named, that is to say, 30,000 *l.*, do you think that you would be able to satisfy the lenders that there was adequate security for the payment of the interest, and the repayment of the capital?—I see my way clear to our paying the interest, even if the revenue is not greater than at the present time; but I only say that on the supposition that it would be possible to buy up the old debt at a low sum.

355. Sir *Francis Goldsmid.*] What sum have you taken for the old debts?—£. 4,000.

356. How much is that per cent.?—£. 5 for the 100 *l.* bond.

357. Mr. *Hankey.*] You are aware that if any lenders would be found, they would look probably to the repayment of principal as well as to interest?—Quite so.

358. You never contemplated any arrangement by which the principal could be repaid?—Only by the increase of traffic. I think that traders would be able to give evidence here, who would say that if they had facilities, they could greatly increase the traffic.

359. And you think that such a probable statement would be made as would induce persons lending the money to be satisfied that that result could be carried out?—I think if they would take the trouble to ascertain all the facts, that might be so.

360. Persons undertaking such a thing would probably go into the details?—Yes; if the works were put into thorough repair and were done substantially, the annual cost for repairs would be, of course, very limited in future.

361. Do you think that any sum from 20,000 *l.* to 30,000 *l.* would put these works generally into an efficient state of repair?—I believe so.

362. Mr. *Neate.*] You conceive, do you not, that the supply of water below Staines depends in some measure on the keeping up of the water above Staines?—Yes.

363. In any considerable degree, do you think?—Yes, in the summer time.

364. Then you think, perhaps, that the Commissioners should have a share of the 11,000 *l.* now received by the Thames Conservancy Board?—I have never considered that question; but of course the supply must be derived from the upper part of the river.

365. Sir *Francis Goldsmid.*] Have you gone into the question what tolls you would charge in order to get this revenue, which is to pay the interest on the newly borrowed money?—Yes.

366. On coals, for instance, what would you charge in order to enable you to compete with the railway, if you would attempt to compete with it?—This (*handing in the same to the Committee*) is a printed table of tolls.

367. Are these the existing tolls?—It is a table of tolls drawn up by the general clerk, which would enable the traders to have competition with the railway.

368. Do you in this table propose to charge tolls on coals which are smaller than the tolls on the railway?—That is so.

369. So as to enable the trader to afford the expense of paying for his barge, and so on, besides the expense of the passage?—Yes. Then I think that there will be witnesses who will state that by the use of steam-tugs the cost of hauling would be very much reduced, and that would put us in a very favourable position.

370. Do you suppose that this would enable you to compete with the railway, for instance, for the carriage of coals from London to Reading or to Oxford?—Yes.

371. Do you remember your proposed toll for a ton of coals, from London to Oxford?—One shilling and threepence three farthings; we propose here for the whole of the tolls right through.

372. Including

372. Including the Thames Conservancy tolls, do you mean?—No, not including the Thames Conservancy tolls.

373. Do you know what they charge besides that?—To our district they charge 9*d.*, and we propose to charge 1*s.* 3¾*d.*

374. Making something over 2*s.* in the whole?—Yes.

375. Do you know the present charge by railway for carrying coal from London to Oxford; is it 1*d.* a mile?—Perhaps so.

376. Assuming that the navigation was abandoned, would the works that the millowners would find it necessary to make for retaining the water for their own interest, sufficiently preserve or equalise the supply of water for London?—No, I believe not; and I believe, too, that there would be constant litigation, because, an advantage to one miller is an injury, in most cases, to the one above or the one below.

377. Colonel *Knox.*] Supposing that a restrictive clause, such as you shadowed forth, was put into any enactment with powers to the Commissioners over the millowners to take away their right of stopping the water, or regulating the weirs, do not you think that it would be a very considerable interference with the trade of the great paper-makers, for example?—To some extent it would, but I have stated that I would allow the paper-makers and the millers to send their own engineers to look after their interests, and that the regulation should be to meet both interests as far as possible. Mr. *J. Castle.* 4 May 1865.

378. Mr. *Bathurst.*] Is not the drainage of the land into the river much more than formerly?—In many parts.

379. Therefore, if the weirs were taken away, it would not be returning to the old state of things which existed before the weirs were put there?—No, it would not.

Mr. Stephen William Leach, called in; and Examined.

380. *Chairman.*] What office do you hold?—I am the Engineer to the Conservators of the River Thames. Mr. *S. W. Leach.*

381. How long have you had that appointment?—I have held it since they were appointed in the year 1857; and also I was Engineer to the Corporation of London for 15 years before that.

382. Are you acquainted with the upper part of the river above Staines?—I am.

383. Are you conversant with the nature of the traffic on that part of the navigation?—I am.

384. Will you state how you came to be conversant with it?—I held an office under the Corporation of London which brought me very frequently into communication with the traders on that part of the river. During the 15 years which I have mentioned railway competition was being developed, and I was frequently in communication with the traders as to the best mode of meeting it, and that brought under my notice the difficulties under which they laboured, and the improvements which they required.

385. Some of the traffic which passes on the river above Staines has come through your district?—Yes; it used to be a very important item in our receipts.

386. Then the diminution of traffic above Staines has lessened your receipts, has it?—Very much.

387. What are your views as to the present state of the navigation above Staines generally?—With regard to the works, the examination which I have made of them has satisfied me that they are in a most dilapidated state; some of them particularly in a highly dangerous condition; I would not answer for the maintenance of some of them for a month; there were three particularly which I had an opportunity of looking at in the neighbourhood of Henley a fortnight ago, and two of them were in a most critical state; of course the giving way of either of them would put a stop to the whole navigation.

388. What difficulties do the Commissioners labour under, do you think, besides the condition of their works; what are the difficulties which stand in the way of the navigation being what it ought to be?—It has always been represented to me that the power of the millowners to deal with the water as they do is very prejudicial to the navigation. Of course the miller's first object is to work the mill to his own advantage; he has very little regard to the navigation. The system of flashing which had to be adopted is also prejudicil, and is this: On certain days the millers are compelled to draw the heads of water so as to make an artificial depth for the purpose of passing the navigation. Now, if from any accident a barge did not happen to take advantage of this flash it would be several days before it could move again, and that caused the voyage to be so exceedingly uncertain that it discouraged the trade very much indeed. The traders, when I was in communication with them, mentioned to me that the time the voyage occupied was not so important as that it should be completed within a certain time, but the uncertainty about it they felt to be one of the greatest difficulties they had to deal with.

389. There is a shortness of water in dry seasons, is there not?—Yes; that was, in fact, what rendered the flashing necessary, but they could not, even with the flashing, prevent detentions in the navigation. There was one bargeowner who made his barges very shallow, but even with that he was not able to meet the difficulty; the greater number of the barges are obliged to go with such short cargoes in the summer time that they could not work their trade with profit.

390. Do you think that the tolls on the navigation require reduction, in order to enable it to compete with railways?—Yes; that was found by the Corporation of London rather a difficult question to deal with. It occurred on one or two occasions that they proposed to the Commissioners to unite in a joint reduction of tolls; but I believe that every measure of the Commissioners had to be confirmed by some subsequent meeting, and it was more than once the case, I believe, that a resolution come to at one meeting of the Commissioners was reversed at another, and the consequence was, that there was never any joint action between the two parties, the Corporation of London and the Commissioners. That was not the case on the Guildford and the Basingstoke navigation; the managers of those navigations always acted in concord with the Corporation of London; in that case the parties acted in harmony, and both reduced their tolls to a consider-

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able extent to meet the railway competition, and the consequence has been that a very considerable trade has been maintained; the number of tons has fallen off, comparatively, but very little; of course the lower rate of toll does not produce the same amount as previously, but the traffic has been maintained.

391. Sir *Francis Goldsmid.*] In what proportion has the reduction taken place in regard to the amount of tons carried in the year?—I could not state that now.

392. *Chairman.*] In fact, you have reduced your tolls, have you not, upon the part of the Thames navigation that is under the Conservancy?—Very much.

393. But you have been unable to get the Commissioners to co-operate in a corresponding reduction?—That was the case when the question was mooted; but for some years past there has been no attempt at union between the two bodies with that view.

394. Has the tonnage been maintained on the district below Staines under the Conservancy?—Yes, it has to an extent which has quite astonished me, and I attribute it to the low rate of toll.

395. Do you happen to recollect whether the tonnage is less than it was before the railways existed?—It is somewhat less; at certain points it is more, but those are points nearer London, not points which are exposed to competition so much as the more remote places.

396. Do you think that the dilapidated state of the works has also had much to do with the falling off of the traffic?—Decidedly. I was informed some time ago that a firm at Reading, which had been working a steam barge on the river contemplated placing a larger one on and extending their trade, but the probability of the locks going to ruin has prevented their doing so.

397. Have the charges caused by the old lock tolls prevented competition with the railways?—That was the sorest point; these old locks were no longer in existence, and yet the traders were compelled to pay the same toll as they paid when they were used. In the statement that was made to the Committee this morning, it appeared that the old lock tolls were something between 40 and 50 per cent. of the legitimate tolls between Staines and Oxford.

398. You have spoken generally of the dilapidated state of the works; have you yourself examined any of them carefully, so as to ascertain what the extent of the dilapidation is, and what their actual condition is?—Yes.

399. Will you tell us the result of that examination?—Some of the locks it would be absurd to attempt to repair; they are so utterly dilapidated that it would be throwing away money to lay out the sum necessary to put them into a workable condition, and I consider that there is a defect in a great number of them, that is, the shortness of water on the lower sill and in the depth of the lock, which operates very much indeed against the trade being advantageously carried on. In repairing an old lock it is exceedingly difficult to make any additional depth on the sills.

400. What material are the works generally constructed of?—Mostly of timber.

401. I suppose it is very old and decayed now?—Very indeed.

402. Can you mention any particular locks that are in a state of imminent danger?—Yes; there are two that I have mentioned I had examined a few days ago: one was at Shiplake, near Henley, and the other was at Hambleton.

403. You consider that their days are numbered?—Yes.

404. Mr. *Neate.*] The danger apprehended is that the gates may be crushed in, is it not?—Yes; or that the water may find its way in under the sill, and destroy the capability of holding the head of water.

405. If the gates were to give way, that would be attended with considerable danger of drowning to those who might be in any boats in the lock?—Yes.

406. Is the Bray lock in a good state?—That is only used at low-water time.

407. There is a very strong current through it, is not there?—Yes.

408. *Chairman.*] I suppose that as the water passes under these sills it makes the openings larger?—Yes; and it is going on day and night.

409. Have any of the works actually given way?—Yes. I believe that in the case of this Shiplake lock, a portion of it gave way during the last winter; and the Bell weir-lock, the first lock above the Conservators' jurisdiction, was repaired last year, just in time to prevent its giving way, but it was in a most critical state.

410. Mr. *Dawson Damer.*] Have you ever seen the river between this and last year stop flowing at all over the weir?—Never.

411. *Chairman.*] Supposing you were asked the question, as an engineer, what would you recommend to be done?—There are some of the locks which, as I said before, it would be throwing away money to repair; they must be rebuilt; there are some of them which might be repaired for a time. I could not very readily particularise to which of them that is applicable. The lock just below Oxford was repaired last year, but that has the defect of having only three feet upon the lower sill. Iffley, Culham, Clifton, Days, Moulsford, Whitchurch, Maple-Durham, Caversham, Shiplake, Marsh, Hambleton, Hurley, Temple, Cookham, Romney, Old Windsor, and Bell weir; all those locks are in a very bad state. I do not mean to say that they would all require to be rebuilt.

412. You have not made up your mind which would require rebuilding?—No; I have not examined them with that view.

413. In your examination, did you ascertain the state of the banks of the river?—Yes, I did. There are several parts of the banks which have been undermined, and which are being washed away to an extent exceedingly prejudicial to the river; there are three or four places which I noted; one was at Shillingford, where there is a considerable length of the river bank washed away. I have been told that the towing-path there has been washed bodily away two or three times, and has been set back; of course that is a very prejudicial thing for the river, because the earth of which the bank is formed is washed away, and must be deposited somewhere or other; but almost a worse result than that is that the channel gets distorted, and that again encourages the formation of shoals. At Caversham I noticed a bank in a very dilapidated state, and at Hambleton, Marlow, and below Bell weir, there were banks that more particularly attracted my attention;

tion; they were in a state particularly prejudicial to the navigation of the river.

414. I suppose you think that the authorities who have the management of the river should have power to attend to these points?—Certainly, such power as the conservators have; power to give the owners of wharves or banks abutting on the river notice to repair them when in a dilapidated state, and power to compel them to do so.

415. Are you aware that it has come to this, either that the navigation will have to be abandoned altogether, or that some steps will have to be taken beyond the power of the Commissioners to restore it?—I am quite sure of that.

416. Have you formed any opinion as to the abandonment of the navigation?—Yes.

417. Will you state what your views are on that point?—The abandonment of the navigation would of course be brought about by the failure of the locks; and the miller, in order to keep his mill going, must put a dam at the lock which has given way. The first thing which that does is to stop the navigable highway.

418. Sir *Francis Goldsmid.*] Has he the right by law to place that dam there?—No; but it would either come to that or the destruction of his mill-power.

419. He would have to get power to do it?—I think that in many cases they would do it, and risk the results; of course, if they did so, it would cause questions to arise which would be troublesome to deal with.

420. Supposing the navigation to be abandoned, and the millowner, in the interests of his mill, to erect a dam, who would be the parties injured?—The stoppage of the navigation would also lead to the silting up of the channel of the river, and as the channel of the river was silted up, of course the escape of flood water would be affected; it would not have the facilities of escape which it would have otherwise.

421. *Chairman.*] That would make a conflict between the millowners and the landowners?—Yes.

422. Have any other results occurred to you as the consequences of the abandonment of the navigation?—I think that another result of the abandonment of the navigation would be a direct injury to the millowners themselves; the silting up of the channel would decidedly affect the power of their mills; for instance, if that occurred at the tail of their mills, it would affect the level between the head and the tail water, and that would immediately result in the loss of power.

423. Mr. *Neate.*] You are now speaking of the abandonment of the navigation, concurrently with new dams being set up by the millers?—Yes; then another result would be, that the river, if it were abandoned in that way, would be left to itself to find just what channels it could; and we know perfectly well that when that is the case, landowners are very apt to take liberties with the river, by throwing out groyns, or by other devices in order to increase their land by accretion. Of course that tends to a further interference with the course of the river, and to the formation of shoals. That again would be a question which would give rise to a very great deal of litigation. Those are the principal points that occur to me as affecting the river; of course too there would be the loss of the means of competition which now exists, and which is certainly important to so large a district as that through which the river passes.

424. Take another state of things; suppose not only that the locks are swept away, but that they are not replaced, and that there was no real obstruction till you came to Staines, how would that operate?—There would be less facility for floods to pass off than there is when the navigation is properly maintained.

425. You do not think that it would increase the flood above Staines, do you?—No, but it would tend to the flooding of the low line land on the borders of the Thames before it got to Staines.

426. Sir *Frederic Smith.*] If all obstructions are removed, mills are naturally impediments to the stream, are they not?—I think it is rather the reverse. A weir, if it is properly constructed, ought not to obstruct a land flood at all; it is quite possible so to construct it as that it shall not, and if the navigation is kept open, as it ought to be, it affords a more capacious channel for the flood water to escape. I have a most conclusive instance of that in our own district. This (*producing the same*) is a diagram showing a longitudinal section of the river below Sunbury lock, which was rebuilt some years ago by the Conservators. This part which is tinted red here was dredged away; now before this was dredged away, that line (*pointing to the same*) was the low water of the river. Since this has been dredged away that is the surface (*explaining the diagram*). All that being removed gives additional space to the water to pass away, and we find it absolutely the case that our towing path below, which was formerly under water when the floods were at a certain height, now stands above the water, and the case would be similar wherever the navigation was properly treated.

427. Mr. *Dawson Damer.*] Would there be any general want of water on the Thames unless you kept up these weirs?—Yes, decidedly.

428. You would have, you think, if these weirs were done away with, a great flood at a certain time, and a failure of water immediately after?—Yes. With reference to this diagram, the Committee will see in a moment that if improvements of this kind were carried out, they would very materially increase the power of the mills if the tail-water was lowered.

429. Mr. *Neate.*] Would that lower the head water as much as the tail?—It would not do that; the head would be maintained.

430. *Chairman.*] Do you see any prospect of that navigation being so far supported, that it would be a security for the investment of money?—I am not prepared to speak positively about that, because of late years I have not been much in communication with the traders, since I have held office under the Conservators.

431. Sir *Francis Goldsmid.*] Who is the officer of the Conservators who comes in communication with the traders?—The collector of the tolls.

432. *Chairman.*] You think, do not you, that it is absolutely necessary that these repairs should be done and the tolls materially reduced, in order to prevent the navigation being given up altogether?—I do; I have every reason to believe, from the communications which I formerly had with traders, that a reduction of tolls and the improvement of the navigation would secure a considerable trade on the river.

433. Sir *Francis Goldsmid.*] Have you considered what would be the effect if the navigation were given

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given up; whether the interests of the millowners or the interests of the water companies would induce either of those parties to put up dams to preserve and economise the water in the river?—The millowners would do it as far as they could, because their business is entirely dependent upon it.

434. Do you think that the works which the millowners would put up for their own protection would in some degree have the effect also of economising the supply of water for London?—No, I do not see myself how it would affect that.

435. Do not you think that the works which hey would put up would prevent the rapid flowng away of water in flood time?—Yes, I think t would.

436. Would not that have the effect of preserving the supply of water for the companies?—No, I think not; I do not think that there is any material storage of water in those ponds; not such a storage as would affect the water companies.

437. Are we to understand that you do not think that they would be affected one way or the other even if the navigation were abandoned?—Certainly, so far as this: I believe it is an admitted fact now, that the disturbance which water undergoes in falling over the weirs tends to purify it; chemists, I think, are agreed on that.

438. It is merely as to quality then, not quantity?—But that is a very material element.

439. So far as quantity is concerned, you do not think that the abandonment of the navigation would affect the supply of water to the water companies?—Not materially; it would have this prejudicial effect, that it would lead to a much larger growth of weeds; and the companies complain that the weeds, especially when cut by the millers, make the water taste.

440. Mr. *Neate.*] Where do the water companies bring their supply from?—From Hampton and from Thames Ditton.

441. Can you tell us the quantity which remains after they have taken their supply?—I believe that the smallest quantity which fell over Teddington Weir in the dry season of last year in one day was about 380,000,000 of gallons, after the water companies had taken their supply.

442. Mr. *Dawson Damer.*] Are you aware that the three companies have the power of taking three and a half million gallons at Hampton Wick a-day?—Much more than that; they have the power to take 60 millions altogether.

443. *Chairman.*] You mentioned, did you not, in your report, that in some cases you thought one lock might be substituted for two, and the expense of maintenance lessened thereby, and less obstruction caused?—Yes; it occurred to me that that might be done; but I should not like to give a positive opinion upon it unless I had the opporunity of making a proper survey and taking levels. I might mention that the Conservators have it in contemplation to substitute one lock for their two upper ones; and they have been hesitating about that simply because they were unwilling to encounter the expense that would have been involved in building a new lock, until they knew what prospect there was of the upper trade being continued.

444. If that navigation were discontinued altogether, it would make a great reduction in our receipts, would it?—Yes.

445. Have you gone into the question sufficiently to make an estimate of that reduction?—No, I have not.

446. Mr. *Neate.*] Not even an approximate estimate?—No.

447. Do you know whether the taking of water by the water companies has sensibly affected the level of the river in the summer?—No, I do not think it has; when the five companies took powers to obtain their supply, the Corporation of London commenced, and the Conservators completed, certain works that had the effect of preventing that—building three locks at a lower level and dredging the river; and the payments which the water companies make are to reimburse the expenses incurred in that way; they are not for the sale of the water at all.

448. The deepening of the bed of the river is to increase the supply, is it not?—Yes; and the abstraction of the water would have so much reduced the depth in the channels that there would have been a difficulty in carrying the navigation on; that made the necessity for dredging.

449. Mr. *Dawson Damer.*] You are not aware that the river has stopped, on certain occasions, flowing over Teddington Weir, while the water was being stored at Thames Ditton?—No, it certainly never was so.

450. On the 17th of June last, did not that occur?—Possibly it did not flow over the Tumbling Bay, but it must have flowed through the open weir.

451. Mr. *Henry Fenwick.*] You have stated that there is a diminution of traffic so great as to affect your receipts on the upper branch of the Thames, and you attribute that partly to the bad state of the locks?—Certainly.

452. To what other cause do you attribute that diminution of traffic?—When the railway competition first affected the trade on the river, the Commissioners did not see the necessity of reducing the tolls to meet it. They, I believe, felt that it was a doomed thing; that it was only a question of time how long it would last, and they did not join the Corporation of London in the reduction of tolls.

453. That is to say it is the competition of the railway which has diminished the traffic?—It had the effect then of driving a large quantity of traffic off the river, which I believe would have been retained had a reduction of tolls been made.

454. Do you believe that, under any circumstances, the River Thames, with its numerous locks, can compete successfully, to any extent, with the railways?—It would depend, of course, on the amount laid out upon it; but it is very remarkable how the competition is carried on: it surprises me frequently, and therefore I should be loth to say that such a trade could not be carried on on the river as would really pay.

455. Do you know other instances of water navigation in England where it comes in competition with the railways?—Yes, the River Lea.

456. There are many others, are there not?—Yes.

457. In the Midland districts of England there are numerous instances, are there not?—Yes.

458. Do you not know as a fact that in almost every case those canals have competed unfavourably with the railways that come in competition with them?—I think it generally must be the case.

459. May it not then be taken as a rule, that where a water navigation with numerous locks comes in competition with a railway, the traffic, must

must go from the water navigation to the railway system?—To a certain extent.

460. Would you under those circumstances recommend a large outlay of money to support a system of traffic arrangements which cannot compete successfully with one already in existence?—Not unless I could have good reason to believe that there would be an amount of traffic on the navigation which would render it worth while to lay out the sum of money.

461. That is to say, unless you thought that in the individual case the rule would not apply?—Not exactly that. I think that it would be possible to collect evidence to show that a certain amount of traffic would come on the river, provided it were put into a proper state to receive it.

462. Does not that depend entirely on the power of the water navigation being cheaper and more efficient than that of the railways?—Not altogether; because there are certain points which are better served by water navigation than they are by the railways.

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463. Colonel *Knox.*] Is it within your knowledge that it constantly happens that goods at the stations of the Great Western Railway Company are hung up for three or four days, because they have not the means of carrying the goods' traffic without interfering with their passenger traffic?—I know that perfectly well; many traders have told me of it.

464. Mr. *Hankey.*] Do you know that the Grand Junction Canal has still a great deal of traffic through competing with the London and North-Western Railway?—Yes.

Martis, 9° *die Maii*, 1865.

MEMBERS PRESENT:

Mr. Bathurst.	Colonel Knox.
Mr. Dawson Damer.	Mr. Locke.
Mr. Henry Fenwick.	Mr. Neate.
Mr. Milner Gibson.	Sir Frederic Smith.
Mr. Hankey.	Mr. John Reginald Yorke.

THE RIGHT HON. THOMAS MILNER GIBSON, IN THE CHAIR.

Mr. JOHN THOMAS WOODHOUSE, called in; and Examined.

Mr. J. T. Woodhouse.

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465. *Chairman.*] WHAT is your occupation?—I am a Civil and Mining Engineer.

466. Are you acquainted with inland navigation of canals?—I am.

467. Have you any experience of the working on canals and rivers?—I have had many years experience of working upon canals. I will enumerate them. The Ashby-de-la-Zouch Canal, the Coventry Canal, the Oxford Canal, and the Grand Junction Canal; and I also know intimately the navigation from the Trent to the Mersey, and the inland water communications in the counties of Derby, Nottingham, Stafford, and Warwick.

468. Have you any information as to the competition between railways and canals?—Yes, I have.

469. Will you state to the Committee what you know on that subject?—The information that I have is this—that when the Canal Companies have not taken care to keep their lines of canal in working order and repair, the competition with the railways has been and is becoming fatal to them; but that in those instances where they do keep the canals and ways in repair, the canals compete with the railway system successfully.

470. Can you give us any instances of the fact?—I will take the instance of the line of canals in direct communication with the Thames navigation, commencing with the Oxford Canal, which joins the Thames navigation at Oxford. The Oxford Canal has been well managed for many years.

471. Mr. *Neate.*] Where does it begin?—At a place near Coventry, called Sutton Wharf, and that canal has been kept in admirable repair; large sums of money have been laid out from time to time in straightening it and in widening it, and in meeting the requirements of the trade, and the consequence has been that upon that canal the full quantity of coal traffic has been maintained. I am speaking solely now with reference to coal traffic. Next, going northwards, beyond the Oxford Canal is the Coventry Canal; the Coventry Canal is also kept in a good state of repair; beyond it is the Ashby-de-la-Zouch Canal, at the end of which canal are the collieries which supply principally the coal to the Oxford market, and send a large quantity of coal down the Thames navigation also, which is the subject of the present inquiry. Those canals which I have described are in an excellent state of repair. The Ashby-de-la-Zouch Canal is the property of the Midland Railway Company; but at the time when the transfer of that property took place, care was taken to ensure the canal being kept in a proper and adequate state of repair, and also that the tonnages should be kept within certain limits, so as to ensure to the collieries existing upon that canal their means of outlet by water.

472. *Chairman.*] You have mentioned the Grand Junction Canal; is that kept in good repair?—Yes; the Grand Junction Canal is also kept in an admirable state of repair; the Grand Junction Canal commences after the Oxford Canal, and runs up to London parallel with the London and North Western Railway.

473. Has that Grand Junction Canal retained its traffic?—Yes; I am speaking of the coal traffic altogether; I am not speaking of other goods traffic at all.

474. Do you know anything of the nature of the traffic on the Thames navigation?—I know a little of it; I may perhaps say that I am interested as being the principal agent for all the collieries on the line of the Ashby-de-la-Zouch Canal that send coals down the Thames navigation; and my attention was called to the subject by our sale agent, who pointed out to me that the Thames navigation was gradually falling out of repair, and that we should lose the whole of the traffic upon that navigation; I then immediately placed myself in communication with the gentleman who is the Clerk to the Commissioners, Mr. Graham, of Abingdon, and I made a personal inspection of the Thames navigation, commencing at Oxford and going down as far as Reading, examining personally nearly all the locks and all the weirs, and the state of repair in which they are; that is the only time that I have examined the line of the canal personally.

475. Mr. *Neate.*] Did you make a written report of your inspection?—No, no formal report; I have only prepared this evidence as arising from that inspection.

476. *Chairman.*] Do I rightly understand you to say that a large portion of the traffic on the Thames navigation is supplied from the collieries on the Ashby-de-la-Zouch Canal?—Yes.

477. What other collieries are there supplying the traffic on the Thames?—There are collieries in Warwickshire, on the line of the Coventry Canal, but I believe that the quantity which they send down is not great; I do not know what it is; I may say that we sent from the Moira Collieries and the Gresley Collieries, which are on the Ashby-de-la-Zouch Canal, last year upwards of 4,600 vessels (small vessels laden with coal) into the Oxford Canal, and of that quantity upwards of 600 passed into the Thames navigation beyond Oxford.

478. A good deal of that coal was consumed at Oxford, I suppose?—The larger proportion; about 100,000 tons in round figures, was consumed at Oxford, and in the neighbourhood of the wharves and towns along the line of the Oxford Canal; the remaining 17,000 tons was consumed in the neighbourhood of the different places and wharves on the Thames navigation, Abingdon, Wallingford, and so on.

479. Then a very large quantity of this coal was in fact sent down the Thames navigation?—Yes.

480. Do not the existing railways afford adequate facilities for the coal traffic?—They do not.

481. Sir *Frederic Smith.*] Will you explain how that arises?—Taking the railways as at present constructed, their means of carriage are totally inadequate. The town of Oxford, for instance, is supplied through the line of the London and North Western Railway on the one hand, and the Great Western Railway on the other hand. The London and North Western traffic is sent by Bletchley on the London and North Western line, and then down to Oxford; and the other traffic is sent from the neighbourhood of Birmingham by the narrow gauge to Oxford that way. But the detentions of waggons, and the loss and breakage of coal, and the want of power and want of accommodation are so great, that the traders as a body infinitely prefer the water communication, and I may add that water communication is particularly adapted for this kind of coal. This coal is a dry splint coal, not at all bituminous, and it is necessary for the purposes of the traders that it should store or stack, and therefore it has to be sent up in large lumps. That sort of coal is carried much easier and much better, and with less breakage by the quiet mode of transit over the canal, where there is no bumping as there is upon the railway, than it is carried by the railway. We send large quantities of coal by railway as well as by canal, but we find great inconvenience on lines of railway from the breakage arising from shunting damaging the coal most seriously, and from the detention of waggons and want of wharf room and stacking accommodation at the railway terminals. I may quote the town of Oxford. The arrangements at Oxford are totally inadequate to do a large railway traffic in coal; there is not room for stacking a large quantity of coal, and it is an uncertain and an expensive place to get to. On the other hand, the canal in the lower part of Oxford terminates by a basin, with a large place for stacking coal all round about it, and the practice is, during the summer months, to stack the coal very largely indeed at Oxford which is brought up by these canals, and then it is ready for the winter consumption during Term time, when the great consumption takes place.

482. Mr. *Neate.*] The Midland Railway does not bring any coal to Oxford, does it?—Yes.

483. I thought you mentioned the London and North Western and the Great Western Railway Companies?—Yes, I mentioned the North Western Company as being in immediate communication with Oxford; the Midland line joins the London and North Western at Rugby. The coal coming from the collieries that I have spoken of by railway runs on the Midland line from the Moira district at the end of the Ashby Canal to Leicester, and from thence to Rugby; that is the Midland Railway; then it is placed in the hands of the London and North Western Railway Company there, being taken on to Bletchley, and from Bletchley to Oxford.

484. You say that the Midland Company have purchased the Ashby-de-la-Zouch Canal?—Yes.

485. With a view of diverting traffic into the railway?—Yes.

486. That canal would bring the coal into their line at Coventry, would it not?—Near to Coventry.

487. What would be the freight per ton going round by Rugby and then going on to the North Western line?—The railway charge would be about three farthings a ton a mile.

488. It is a long way round?—Yes.

489. Much farther than it would be by canal?—Yes.

490. The Midland Company might send round by Worcester, might they not?—Yes, they might. There is a nearer cut than Worcester; there is a little branch that one of the companies made (I think it was the Great Western Company) close to the town of Birmingham, and there they can run on to the narrow gauge.

491. The Midland Railway Company is now in friendly connection with the Great Western, is it not?—I do not know anything about their friendly relations; I know that they are very often in friendly relations when dealing with us, but amongst themselves I do not know what they do.

492. *Chairman.*] The London and North Western Railway and the Midland Railway are constantly choked with traffic in the autumn and winter months, are they not, and the traffic stopped?—Yes, continually; we have continual notices from the London and North Western Company to stop sending traffic to Rugby off the Midland line.

493. Is that becoming the case with the Great Western Railway?—Yes, not to the same extent; the Great Western Railway has only recently been opened there, but we have experienced many inconveniences and losses already; what it will be when the traffic is further developed, I do not know.

494. Do you consider that the traffic of the railways would be relieved if the navigation of the Thames were improved?—That would depend on the quantity of coal which the Thames districts consumed.

495. What is your opinion upon the point?—My opinion is that if the Thames navigation is improved, and kept in repair, the districts which are now supplied by water communication will continue to be supplied so, and that the railways will not be able to supersede it. I am not of course advocating for a moment doing away with the railways.

496. You say that they are choked at present; the improvement of the navigation would have a tendency

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a tendency to prevent the stoppage of trade which must arise from that fact, would it not?—Yes. This is a Table prepared by our clerk, showing the relative traffic on the Thames navigation and the railways during the years 1863 and 1864. (*The same was handed in.*—Vide *Appendix.*)

497. You have spoken of delays on the railways; is it not true that delays occurs on the canals from frosts and interruptions of that kind?—It is perfectly true that delays do occur upon the canals and river navigation from frosts, and from floods and from draughts, but those contingencies are always expected, and always provided for. In the very dry weather it no doubt would be policy in the Thames Commissioners to repair their river, and in other seasons of detention, for the canal companies to take the opportunity of doing repair when the traffic is utterly stopped from causes over which they have no control, such as frosts, and so on. But on the whole, the detentions are not so serious upon canals (because they are expected there), as they are upon railways; it is impossible to know what we have to expect on railways at all.

498. Sir *Frederic Smith.*] Can you give us the average of the time for which you are stopped in reference to the time for which you are not stopped?—On the Ashby-de-la-Zouch Canal we are stopped on the average from frost about three or four weeks every year; that I know from my own knowledge. That is a long level canal with no flow of water through it, and therefore it freezes immediately. Those canals which have locks upon them, of course are less liable to be frozen, and many are not frozen at all except in severe weather.

499. In dry weather what is the average of detention?—In dry weather we should not have much detention from canals for this reason, that the canal companies have taken care to provide pumping power to bring the water to the higher level. The Oxford Canal and the Coventry Canal, and also the Grand Junction Canal have that pumping power provided. The Ashby-de-la-Zouch Canal has large reservoirs, and also has water from the mines pumped into it.

500. Mr. *Neate.*] There is a great reservoir at the Oxford Canal at Banbury, is there not?—Yes, a very large one. I believe there is a surplus of water in the Oxford Canal, but the engineer of that canal is in the room.

501. *Chairman.*] You say that the detentions on the canal are not so inconvenient as the detentions on railways, because the former can be foreseen, and the latter cannot?—Certainly. The detentions on railways arise very much indeed from the practice of coal owners and coal merchants sending all their waggons at one time, just when the demand takes place, that is to say, in the winter time, and then it is more than the railway companies can do to convey their traffic.

502. Sir *Frederic Smith.*] Do the railway people show any partiality between the different proprietors of coal?—I have heard it many times alleged that the railway people show partiality; but I myself have no complaints to make on that head; I could get up some complaint, but we remonstrate and get on with them pretty well now.

503. *Chairman.*] Have you examined the Thames navigation between Oxford and Reading, and the position of the various locks upon the river?—Yes.

504. Will you state what the result of your examination is?—The result of my examination is that generally the locks and weirs on the Thames navigation are in a very dangerous state indeed. I commenced at Oxford in that part where the Thames runs opposite the Christchurch Meadow, and there there is a lock somewhat out of repair, an old fashioned affair, and a bridge very much out of repair, and some walling wants doing to keep up the hauling path. I then went further down to the first lock below Oxford; that is much out of repair, and the sluice is out of order; then going down to the next place there is a ferry, and that was also out of repair, and it appears that at that place there was a lock some years ago which was given up, and the mill-owner had very indiscreetly opened the sluice of this lock, allowed the water to rush through with tremendous force, and allowed the water to undermine the embankment between that lock and the next; then the Wallingford Lock is in a very bad state indeed; but that lock has a slight fall also of 17 to 20 inches; that can be easily set right; then there is a lock called Day's Lock in utter ruin; how it holds together I do not know. One of the gates is chained up; the weir is also out of repair, and in a very dangerous condition indeed; any flood breaking down one of those upper places may, of course, destroy the whole of the navigation. I have prepared a plan which is on the table in this room, showing the relative position of the locks and the coal wharves on the Thames navigation and also on the railway.

505. From your examination, you are of opinion, are you not, that the navigation on the upper part of the Thames is likely to be stopped altogether if something is not done to these locks?—I think that they are in very imminent danger indeed; some of them are not worth a year's purchase.

506. Are you aware whether if an adequate expenditure were made in dredging the river and repairing the locks, and if the tolls were reduced, the traffic on the river would be increased?—I am quite confident that it would be immensely increased. Assuming first of all that the locks are put into a proper state of repair and the weirs for securing the water, the tolls and charges on the river must also be modified. In addition to the Commissioners' charges there are charges made by private owners of locks and mills. All those things I have not gone into.

507. Speaking generally, from what sources do you imagine that this increased traffic would come if the navigation were put into a proper state?—I think from coal and from goods: the coal I can speak to, but the goods I cannot.

508. From where would the traffic come, of your own knowledge?—From the Midland Counties off the Oxford Canal. I have no doubt whatever that if this navigation be put into an adequate state of repair, we shall extend our coal traffic materially; almost, if not quite, to London. We do send coals to London now along the line of the Grand Junction Canal. Our wharves are at Paddington, and we shall send those down the river if we can get the navigation improved. We should put on steam power to do the work if it were worth our while.

509. You are the manager of some collieries, are you not?—Yes, all the collieries on the Ashby Canal, the Moira Collieries, the Church Gresley Collieries, and the Granville Collieries.

510. If the navigation were put into a proper state,

state, and the tolls reduced, do you say as manager of those collieries, that you would send a very considerably increased quantity of coals?—I do.

511. Have you in your professional capacity given much consideration to the question of the competition between canals and railways?—I have.

512. Can you give us some information upon that point?—Having resided in the Midland Counties, and having been connected with the coal trade and canals and railways all my life, I have had an ample opportunity of judging of the effect of railway competition. I find, as I stated earlier in my examination, that where the canals are kept in good repair, and where steam power can be applied judiciously, the canals will always compete successfully with the railways.

513. Mr. *Neate.*] As to coals, you mean?—As to coals.

514. *Chairman.*] You are speaking of times when the steam-tug is used on the canal, are you?—Irrespective of the steam-tug, but the steam-tug gives a very great advantage; it reduces the hauling power one half.

515. Have you had any experience of the use of the steam-tug on your Ashby-de-la-Zouch Canal?—Yes; I had been very long of opinion that steam-tugs ought to be applied to canal navigation, and in the year 1843 I put on an experiment boat which we worked on that canal; afterwards we worked it on the Trent and Mersey Canal and several canals; we tried a variety of experiments, and it was found completely to answer our expectations, but nothing was done. But in the year 1859 we established a regular series of steam-tugs upon the Ashby-de-la-Zouch Canal, running along the Oxford Canal as far as Braunston. This was regularly commenced on 2d October 1863, and the boats mentioned in this table were started at that time, and have been running regularly ever since. This table is a time table showing the way that the boats work, and the charges which they make.

516. Who are the owners of the steamers?—The coal owners.

517. Can you state the cost of haulage by these steam-tugs as compared with what it would be by horses?—The cost by horses is one halfpenny per ton per mile; the cost by steam-tugs is a little under a farthing per ton per mile—about two-thirds. Those are the rates which are charged to the traders. (*The Table was handed in.*—Vide *Appendix.*)

518. Mr. *Neate.*] Was there any reason for your stopping at Braunston?—Yes; a long series of locks commenced there.

519. There would not, therefore, be the same facilities for steam navigation below Braunston, as above?—Certainly not; there are certain interruptions from locks, but when those locks were built, which was many years ago, there was no idea whatever of any steam navigation. If there had been any idea of it they would have been arranged differently, so as to have had longer levels. Another objection is, that the locks are many of them single, whereas on the Thames navigation they can admit two at once. The number of boats taken by these steam-tugs will vary from four to eight or 10; we have taken as many as 12, but about six or eight is the most convenient number. The tug-boat goes first, and from this tug-boat is a long hawser, which is about an inch and a quarter in diameter, and that goes the full length of every boat, and each boat bears its own strain. We were a very long time in overcoming that difficulty; we found that when the boats were tied stem and stern together we were liable to pull them in pieces; they would not bear the strain. Then we introduced the hawser, and now each boat is steered upon its own pivot.

520. *Chairman.*] It comes to this, does it not, that you consider a very large sum of money necessary to be laid out upon the Thames navigation if it is to be put into a proper state?—I consider a sum of money necessary. I do not know how we measure largeness.

521. You say that you have examined these works as a professional engineer?—Yes.

522. Have you formed any opinion as to what will be required to repair them?—I think that 20,000 *l.* will put them right (without going into the detail of the estimate) between Oxford and Reading, and make them secure and navigable. Some of the locks may be repaired, and some renewed entirely. I am speaking, of course, of the ground which I examined.

523. Colonel *Knox.*] You did not examine any locks below Reading?—No; the time did not permit me to do it. The weirs are very easily repaired; they are very simple in construction, they are very good and cheap, and easily removed in flood times.

524. *Chairman.*] What would be the consequence to the interests in the Thames Valley, if this navigation were to be given up, and the locks were to be allowed to go into perfect decay?—The consequence of giving up the navigation would be simply this, that the river would then become, comparatively speaking, a broad ditch. There would be no reservoirs for the supply of water, or irrigation of lands, as there now is in the higher part of the stream; the mills and their interests would entirely cease, and in many places where the country is flat, the land would become swampy and a marsh. I cannot tell, without going fully into it, the consequences to the country if the weirs and locks are removed; I only know one instance at all parallel to it, and that I have not had time to inquire into particularly, since I knew it as a boy, that is the River Trent; the Trent was formerly navigable between Burton-upon-Trent and Gainsborough; now it is only navigable from Cavendish Bridge, and that part between Repton and Cavendish Bridge has been abandoned. There are the remains of old weirs, and there is a great swampy place opposite Repton where the stream used to run in, but does not now.

525. Mr. *Neate.*] That swamp became a swamp, did it, since the giving up of the navigation?—So I apprehend, but it is many years since it was given up.

526. Are they more liable to floods in that part where the navigation has been given up?—I am not able to say that, but at that point the River Doe comes in from the hill country of Derbyshire; it comes almost square on to the Trent, and runs right over the meadows.

527. Mr. *Dawson Damer.*] All navigation between Stratford and Lichfield is at an end, is it not?—Yes.

528. *Chairman.*] Do you know the existing charges made on the Thames navigation?—Only from the information of our agents.

529. Do you consider them very heavy?—Some of them are very heavy indeed; I will give

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one instance which I have selected: the Commissioners' toll, for instance, on coal to Wallingford, is 1 *s.* 2½ *d.*, and in addition an old lock toll of 9 *d.*, making it 1 *s.* 11½ *d.*; I am informed that these proprietors of locks in some cases do, and in some do not, keep them in repair.

530. You can speak to the charges, can you not, which as a manager of collieries your coals are subject to?—I have here a list of locks on the Thames navigation. Here are the Commissioners' pound locks and the old locks; the Commissioners' charges appear to be uniform—a rate of 2 *d.* per ton; but the tolls paid to the old lock-owners vary a little.

531. Mr. *Locke.*] What is that 2 *d.* per ton; is it per lock?—For each lock; here are 27 locks in this list, and 2 *d.* is attached to each.

532. Mr. *Neate.*] Twenty-seven locks; between where and where?—Between Bell Weir (that is near Windsor) and Oxford.

533. Twenty-seven between Oxford and Staines, is it not?—I think it is so.

534. Bell Weir is just above Staines?—Yes; here is a memorandum:—"The old lockowners take in some instances to every five tons per voyage, so that when there are 24 tons they take for 20 only" (that is to say, they do not give a full weight). "In other cases it appears that the old lockowners take per voyage on the capacity or full tonnage of the boats, irrespective of the actual freight." There is one lock where the toll is suspended, I see—Blake's Lock.

535. *Chairman.*] Have any complaints been made that the millers improperly work off the water, so that the steady traffic on the navigation is interrupted?—Yes; there are complaints made that the millers draw off the water, and sometimes in fact sell it; when the river is dry and boats wish to make a passage they go and agree with the miller above to flush them down over the scours, and away they go in that way. That acts of course to the prejudice of the navigation. They also draw off their water for the purpose of fishing, and all sorts of irregularities occur.

536. These irregularities prevent a good deal of traffic from being taken on the navigation, do not they?—Most decidedly.

537. Because it cannot be relied on?—Precisely so.

538. Do you consider that the management of the navigation requires change, that is to say, that different managers should be provided or different powers vested in the new managers from those that are now vested in the present Commissioners?—I have not given that subject sufficient consideration to give a decided answer to the question, but it is quite clear that some alteration is needed; it is, I believe, a fact that some years ago there was a very large income made from the Thames navigation, many thousands a year. At that time care ought to have been taken to keep the locks and weirs in repair, and then this inquiry would not have taken place. Instead of that the money was otherwise disposed of, and hence this trouble which we are now in.

539. Mr. *Hankey.*] Do you know how it was disposed of?—I do not. I have wondered very much why they wanted repairing. I have travelled incidentally there. I travelled recently with the engineer of the Commissioners, and he appeared to me to have full information as to what is required with regard to the construction of the locks and the weirs, and so on, and I have no doubt that the other officers are competent; but what the Commissioners may be themselves I do not know at all.

540. *Chairman.*] As you are situated you have a pretty direct interest, have you not, in the navigation of the Thames being kept up and improved?—Yes, and it is that which brings me before the Committee. I want to see the navigation improved, and the railway improved too.

541. Mr. *Neate.*] Do you send coals below Oxford to Reading by the Thames at all?—We send to Pangbourne.

542. *Chairman.*] As you have been considering the subject, have you any suggestions to offer as to improvements in the management of the trust, or can you propose any scheme for getting the navigation out of its difficulty?—The only scheme that I can propose would be that assistance should be given in the way of an adequate sum of money to be laid out in the improvement of the navigation, subject to such regulation and control in the expenditure, and in the income arising therefrom, as the parties advancing the money might deem expedient.

543. But where would you propose to get the money?—Our natural friends we should say would be the Government in the first instance, and if we could not get any from the Government I should try the Oxford Canal, and so on.

544. You would try all the parties interested in upholding the navigation?—Most decidedly.

545. Supposing that they none of them liked the security, and would not advance the money, what would you do then?—I am afraid that we should be then in a fix; we could not undertake as coal-owners to do it. There are plenty of schemes now; we might get up a company to do it, but then we require an Act of Parliament for that. Then I have understood that there are a great many gentlemen, proprietors of bonds, that have been advanced on this navigation many years ago, the whole of which will be sacrificed, of course, if nothing is done. Whether they ought to have looked after their own interests at the time that they had the means of doing it is another question.

546. Mr. *Locke.*] Do you think that you could get up a company for the object?—I daresay we could; companies are very popular things now-a-days.

547. Amidst all their popularity, has there been a company established within a vast number of years within your knowledge to get up a canal?—No; I think not.

548. You think that you might get up a canal company here, the canal being already cut?—Yes.

549. Do you think that you could show people that they would get a dividend?—I think that we could decidedly show that.

550. Do you think that the chairman of a meeting might show it?—Yes.

551. You do not think, do you, that there would be a dividend after all?—Yes, I do.

552. Mr. *Dawson Damer.*] How many waterworks are there on the river?—I do not know; there is a very important waterwork which supplies Windsor Castle, but I cannot speak to that.

553. *Chairman.*] You have got here some fixed incumbrances in the shape of these old lock-tolls and the bondholders; how would you deal with that difficulty?—I should deal with it by the strong arm of the law, in the shape of an Act of Parliament; there is no other way of dealing with

with it. I have been told that these bondholders extend to 80,000 *l.*; and if any company, limited or otherwise, were to be laden with the weight of these 80,000 *l.* bonds, that of itself would be fatal to anything. Those bonds are worth very little now, and I should say that in equity the parties who advanced the money (be they who they may) should be the first to be reimbursed. After that, let the interest come in if it is thought proper.

554. You would postpone that?—Most decidedly.

555. Do you know anything of the lower part of the Thames under the management of the conservators?—Merely from passing over the river.

556. You have not transacted any business with them, or carried any traffic through their navigation?—No.

557. Mr. *Locke.*] Do you know anything about the River Lea?—No.

558. Used there not formerly to be a very great traffic in coal along there?—I am sorry that I do not know the geography of the Lea.

559. The only river that you know anything about is this part of the Thames?—Yes; this part of the Thames between Oxford and Reading.

560. And on the only one that you know about since the railways have been established the traffic is very much diminished?—No, the traffic has held its own.

561. Will you explain that?—In the year 1863 we sold from the collieries that I represent 16,089 tons, and we sold by rail into the same district 1,779 tons. Then in the year 1864 we sold by the river 16,298 tons, and by the rails 2,826 tons, so that in the year 1864, as compared with the year 1863, the traffic on the canal increased 200 tons, and on the railway about 1,000. The river, therefore, has rather more than held its own as to traffic, and the rail has materially increased.

562. Mr. *Dawson Damer.*] On what water did you send all this traffic, was it on the River Thames entirely?—Yes, beginning at Oxford.

563. Mr. *Locke.*] Is that calculation one of your own business?—It is a calculation made by my clerks.

564. Is that only one establishment?—Yes.

565. Then you do not speak for the whole of the traffic?—No, I am speaking for the traffic of the particular collieries that we represent. We are the larger portion of the traffic.

566. That would give an idea therefore as to the comparative advance of the river and the rail?—Yes. Since the opening of the rail the consumption in coal has increased materially; it has increased by the whole amount of what is sent by rail, and it has also increased by the water.

567. However, you think that there is room for both?—I am quite sure that there is, and I am quite sure that if we can get an improved navigation upon the Thames we shall materially increase that quantity.

568. What is the difference in the price of carriage?—It is very little, very few pence difference; but I informed the Committee before that the coal is of that peculiar quality that the merchants want to stack it or store it, and it is convenient to have it brought up in boats without breakage or banging about, and so on: it is not a bituminous coal, and therefore every portion that is broken off goes for nothing.

569. Mr. *Henry Fenwick.*] Where are your collieries?—At the end of the Ashby-de-la-Zouch Canal.

570. What county are they in?—In the county of Leicester.

571. Where were those 16,000 tons to which you referred sent?—Those 16,000 tons passed through various lines of canal, being the Ashby-de-la-Zouch and the Coventry and Oxford Canals, and went into the River Thames at Oxford, and then down the river between the town of Oxford and the town of Reading.

572. What is the distance from your collieries, by canal, to the town of Oxford?—About 70 miles, in round figures; they shortened the canal some years ago; they cut off a great many bends, and straightened it.

573. And how many is it by railway?—I have not the distances, but you may take it as pretty nearly the same.

574. Can you tell me what is the amount of toll per ton of coals payable in passing the whole of the locks between your collieries and Oxford?—From our collieries to Oxford, by rail, it is 7 *s.* 3 *d.* a ton. Then the canal rate is, on the Ashby Canal, 7½ *d.*; there is no separate charge in these canals for locks; it is only on the Thames navigation that these separate charges are made. The charge per ton to Oxford, by canal, is 7 *s.* 4 *d.*

575. As against 7 *s.* 3 *d.* by railway?—As against 7 *s.* 3 *d.*

576. They are very nearly identical?—Very nearly the same.

577. That is between your collieries and Oxford?—Yes.

578. All of which is upon the canal?—We send to Oxford from our collieries both by canal and by railway, and those are the rates.

579. None of the water navigation which you now speak of is upon the River Thames?—None at all.

580. So that really that has no reference to the subject of our present investigation?—Excepting that these form items in the charges for coal sent on to the River Thames, these would be the charges as far as Oxford, and then the Thames navigation charges would be in addition.

581. I understand you to say that the canal and the railway charge nearly the same rate in that case?—Precisely so.

582. Now let us follow the coal when it gets to Oxford and goes down the river. To what place do you send any quantity of coals?—We send to Abingdon; that is the largest quantity.

583. What is the quantity sent there?—In 1863 it was 7,140 tons by river, and 598 by rail.

584. Mr. *Neate.*] You say by rail; where did you take the rail?—We took the rail on the Midland Railway, close to our colliery, and took the coal round by Birmingham.

585. When you say by river, you mean by canal and river, do not you?—Yes.

586. Mr. *Henry Fenwick.*] How far is Abingdon from Oxford?—About nine miles.

587. How many locks are there between Abingdon and Oxford?—There appear to be three locks between those points; then there is a lock at Oxford, of course; that makes four.

588. Do you know what the charge per ton of coals for passing through those locks is, I mean the tolls alone and not the haulage?—1 *s.* 2 *d.*

589. What would be the cost of carriage in addition?—About one halfpenny a ton a mile.

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590. It would be altogether 1*s.* 4 ½ *d.* for nine miles?—Yes.

591. Do not you know as a fact, that upon railways where much mineral traffic is carried, three farthings per ton per mile is considered a fair rate of charge?—Yes.

592. Which for nine miles would amount to 6¾ *d.*?—Yes.

593. As against 1*s.* 4½ *d.*?—Yes, that is so. I think I stated to the Chairman that the rates and tolls wanted modifying on the water.

594. You have been asked some questions about the management; do not you think that, as in railways, continuity of management would be advantageous to the navigation of the Thames generally, from the source down to the sea?—Yes, it is frequently so.

595. You are aware that there is already in existence a body called the Conservancy Board?—I am.

596. And you are aware that, in their management of so much of the river as is within their trust, they have given considerable satisfaction?—I know nothing to the contrary at all.

597. I believe their pecuniary position is favourable, is it not?—Probably so.

598. Do you think that it would be advantageous to the navigation of the Thames, and to the interests which the question involves, that the upper parts of the river above Staines should be put under the same management as that which has been so successful with the lower part of the river?—I see no objection to that whatever.

599. Do not you think that there would be many advantages in it?—There is a decided advantage in having a thorough arrangement, there is no question about it; I only hope that they will take care to let us have very moderate tolls and charges.

600. Are you aware that already the Conservancy Board have reduced the tolls on those locks which are under their management?—No, I am not aware of that.

601. And that the receipts have considerably increased?—I dare say that they have; it would follow, I think; I am not aware of the facts of the case.

602. Do not you generally expect a cheaper management and a more efficient management by having only one Board?—Undoubtedly there is a better opportunity of efficient management under one Board than under a number of Boards.

603. With reference to the question of raising funds to improve these locks, do you think that a probable future increase of revenue would be a sufficient inducement for people to lend money as a security?—I think so, for speculative people; I cannot say positively that it would be so. I know that there are far more unlikely schemes brought out and carried forward.

604. But, as a rule, do you consider that people are apt to lend money on the security of only some probable and hoped-for result?—I do not personally advocate that principle.

605. But now supposing that the upper reaches of the river were in the hands of the Conservancy Board who have credit, who have funds, and whose receipts are increasing, do you think that they would go to the public or to the Public Works Loan Commissioners for a loan with more chance of success than the present Board that manages the upper reaches of the Thames?—There is no question about it, that if the Conservators of the Thames went, they could have any amount of money that they thought proper to ask for. I cannot say anything in regard to the present Commissioners of the Thames; I do not know them.

606. For those who are anxious for a practical improvement of the upper parts of the river, it would appear to be desirable that the management should be handed over to the Conservancy Board?—Yes, if that be the easiest way of raising the funds; of the management itself I do not know anything, because I do not know that part of the river.

607. Colonel *Knox.*] Is it within your knowledge, that the present state of the navigation, from the want of repairs of the locks, and so on, has perfectly paralysed all the carriers and barge-owners on the river, so as to prevent them from entering into any speculation to carry the traffic?—I cannot speak to that at all; but when I was informed of these facts, and came to examine them (which was only last week) personally, I was entirely paralysed as to my future prospects; what has been the effect upon the barge-owners and others I do not know, because I have not been in communication with them.

608. Mr. *Locke.*] You only say that it would be advantageous to turn this over to the Thames Conservancy for the purpose of raising the money?—I only say that, because it is obvious if the money is easily raised by them; I have no doubt whatever of the efficiency of their management, but I cannot speak to that, because I do not even know their engineer; I only want, first, from my own point of view, and, secondly, from a public point of view, to see the thing improved.

Mr. Richard Gillett, called in; and Examined.

Mr. *R. Gillett.*

609. *Chairman.*] What are you?—I am the Engineer and Manager of the Oxford Canal.

610. What is your experience of the canal traffic?—That our canal traffic over the Oxford Canal has been increasing of late years considerably; that it is more now than it was prior to the introduction of the railways; that is to say, we are carrying a greater tonnage over the Oxford Canal than we were before the introduction of the railways.

611. Do you send coal from the Oxford Canal into the Thames?—We do.

612. How much do you send?—We sent last year, below Oxford, 17,000 tons, but altogether we sent about 24,000 tons; we sent a little above Oxford.

613. Has the coal traffic on the Thames, from your canal, been increasing?—It has. I will take that of 1852, which was the lowest point it ever reached; in that year we sent 10,900 tons on to the Thames below Oxford, and in 1864 we sent 17,000 tons.

614. Do you use steam power on you canal?—The Oxford Canal Company are not carriers themselves; they merely keep the line as in the case of a turnpike road, and vessels go over it. The whole question of steam-tugs, I may say, is completely in its infancy; they have only been established

established a very few years, but they are every year increasing, and I think the time will come when we shall see a very large traffic done indeed by tugs over canals. The Grand Junction Canal, I think, commenced with their tugs about four or five years ago; they have now, I dare say, some 40 boats which are working between London and Birmingham, and other places, tugging two boats behind them, taking perhaps altogether a cargo of from 60 to 70 tons; they do the journeys extremely well, and their trade is increasing.

615. Is it your opinion that steam power could be successfully introduced into the Thames navigation?—I have no doubt of it; I do not know that I could give a better instance than what occurred over the northern portion of the Oxford Canal only the other day. A private trader put a tug on the canal himself; he had taken a large contract for stone in the county of Northampton; the tug took up 120 tons a distance of 35 miles in the day; now she took them at half-a-farthing per ton per mile; those were the actual tugging expenses.

616. Mr. *Neate.*] You are not speaking of the toll, but of the expense?—Merely of the tugging.

617. Do you include the consumption of coal?—I include the consumption of coal, the driver of the engine, the fireman, the steerer, and interest on the price of the tug.

618. You include everything, in fact?—Everything as regards the expenses of tugging. I may say that the tug went extremely well; she had 20 tons on board herself, and three boats behind her carried the remaining 100 tons.

619. *Chairman.*] Do not these steam-tugs on the canal injure the banks?—Not at all. The injury it was supposed they would cause was one of the reasons why they were not introduced before; but that notion is now completely exploded. A few years ago, when the tugs were introduced, the canal companies made a great opposition to them; they said, "They are going to wash down our banks, and they will do us great injury." But one or two were determined to try the point; they put them on; the whole thing was investigated and gone into, and was reported upon, and our experience is to this day that they do not do us the slightest injury.

620. They are screw boats, I suppose?—Yes, twin screws.

621. Mr. *Neate.*] Is there any limit as to speed?—There is no limit put on them by law, but practically there is a limit to their speed on the canal.

622. *Chairman.*] What is the greatest width of your canal?—Thirty-five feet.

623. I suppose that those steam-tugs, by clearing the weeds away, improve the navigation?—They do great service to us.

624. Instead of being injurious they are beneficial in that way?—Undoubtedly; the weeds of late years have become a great trouble to us, and where the tugs work, they certainly cut the weeds up and keep the line clear.

625. Have you any knowledge of how far water carriage is preferable to railway carriage for certain descriptions of heavy goods?—We find that crockery from the Staffordshire Potteries, and every description of pottery, slates, and all that description of thing, chemicals, vitriol, and acids, go far better by canal than they do by railway, and at a much cheaper rate. We send over the canal great quantities of coal, grain, acids, pottery, and slates, from all parts of the kingdom.

626. You send a great deal of pottery, you say, over the Oxford Canal?—Yes, it comes directly out of the Staffordshire Potteries.

627. Mr. *Neate.*] There is a great warehouse for potteries, is there not, at the Oxford Wharf?—There is.

628. *Chairman.*] I suppose that if facilities were given in the shape of reduced tolls and improved navigation, the upper navigation of the Thames would carry a good deal of these goods?—I have no doubt of it. I think there could be no better proof that there would be a great traffic, than the very fact that a considerable traffic has been carried on under the existing rates; they seem to me perfectly prohibitory. I will take the case of a Birmingham iron merchant who wishes to send a boat load of iron to Reading; he does not know what he will have to pay, there being so many charges over the Thames; his only chance is to give the man who goes with his vessel a sum of money; but, as a class, those men are not to be trusted with money. The consequence is he is compelled to send by railway. A man taking a contract cannot send his goods down by water, the Thames charges are so extremely high, and not only that, they cannot be got at; the whole system is obstructive.

629. Mr. *Locke.*] Does not the barge owner know what the expenses will be?—The Birmingham men to whom I am alluding keep their own boats, and they send their own men down with the iron.

630. *Chairman.*] You have a direct interest in connection with the Oxford Canal in the maintenance of this upper Thames navigation, have you not?—We have.

631. Do you know anything about the state of the locks yourself as an engineer; have you examined them?—I went down with the engineer of the Thames Commissioners, a short time ago; he asked me to look at them between Oxford and Reading. I also went a few miles above Oxford. I saw, I think, all the locks, with the exception of one or two, and they certainly are in very bad order indeed.

632. But, independent of their condition, the rate of charge of itself would be prohibitory almost of competition with the railway, would it not?—Undoubtedly. To me it is a most extraordinary fact that, under the existing state of things, there should have been any traffic at all.

633. Your Oxford Canal, according to your account, competes successfully with the railway?—It does. For instance, if we take a town like Banbury, where we are competed with by the London and North Western and the Great Western Companies, we take a great quantity of coal into Banbury. I think I shall not be far wrong in saying that we take as much there as the two railway companies together.

634. That is a direct competition?—That is a direct competition.

635. And your traffic increases under it?—Yes.

636. May I ask how the value of your shares stands now?—The lowest point that our shares have touched was 10 years ago, when I joined the company, namely, 105 *l.*; they are now at 154 *l.* and 155 *l.*; some were sold at 156 *l.* the other day.

637. Mr. *Henry Fenwick.*] What was the original share?—They were 100 *l.* shares.

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638. Mr. *Locke.*] Is all the money paid up?—Yes.

639. Mr. *Dawson Damer.*] What is the capital?—178,000 *l.*

640. *Chairman.*] Have you formed any opinion as to what would be necessary to be done in the way of outlay to make the Thames navigation what it ought to be?—The engineer as we were going over the works showed me his figures. and I examined the locks and the weirs with him. I have had a good deal of experience in those things myself, and I think that his estimate will put them in order. I think, he says, about 22,000 *l.* for immediate repairs, and that I think would do it.

641. Is that for the whole distance?—That is the whole distance from Oxford to Staines, but not above Oxford.

642. Is it necessary to construct new works altogether with deeper sills or anything of that kind, or is it enough for the purposes of making the navigation sufficiently good to repair the existing locks and put them in a good state?—I think that all may be repaired. I think there are only one or two locks (two at the most) where the water on the lower sill is rather shallow; but I think it would be only in drought and dry times that boats would not go over those sills.

643. Would you increase, with the present works (supposing them to be put into a good state of repair), those steam-tugs which you think so valuable?—No doubt.

644. You have not, I suppose, turned your mind to any plan for getting the navigation out of its pecuniary difficulties?—I have not.

645. That does not come within your province?—No.

646. Colonel *Knox.*] With your experience of the tug system upon the canals, have you formed any idea what time it would take a barge to go from Staines, against stream, up to Oxford with a steam-tug?—I should think she would go at the rate of about two miles an hour against stream, so that, taking the distance at 82 miles (which I think it is), it would be 41 hours.

647. Of course, coming down, that time would be very much lessened?—Certainly, it would go very much faster.

648. Mr. *J. R. Yorke.*] If there were a certain number of locks near together on a given part of the river, that would make, would it not, the steam navigation of not more advantage than the ordinary navigation?—I do not know that that follows, because where the tugs are working over our canals, and particularly over the Birmingham Canals, the locks are tolerably close together.

649. I think a witness has said that steam navigation was stopped in one case on account of the frequency of locks?—Yes; but it happens in that case that the locks are close together; they have no intermediate pound; where you have a pound of 300 or 400 yards, as is the case on the Warwick Canal and the Birmingham Canals, the steam-tugs work extremely well.

650. There is no such case, you think, on the Thames where the locks are so close together?—Not that I am aware of; indeed, I know that there is no case of the sort.

651. Colonel *Knox.*] Has it come within your observation at any time, or do you know that the coal traffic carried by rail is very much stopped by the number of hours that trucks are kept at a station before they can be forwarded?—I believe that that is a very general complaint; I have been living for 10 years at Rugby, which is the centre of the district, as it were; I have heard repeated complaints of trucks being lost for weeks, in fact, and nothing seen of them; I have been at Rugby Station in the depth of winter repeatedly when the passenger trains could not be got into the station, the line being blocked up with trucks for two miles.

652. Do not you think that if we could bring a coal barge from the Pool up to Oxford in 60 hours we should be able to successfully compete with railways in point of time; I mean by steam, of course?—I am not prepared to answer that question.

653. From the Pool it would be one shipment carried right up to Oxford without any delay?—Yes.

654. Surely that would be a quicker transit of coal, would it not, than sending it by railway, with the risk of a whole coal train being shunted perhaps for 24 hours; it would be a saving of time in that respect, would it not?—Yes, in that case, no doubt, a saving of time and a saving of coal, so that it would be a saving of money in point of fact.

655. Mr. *Dawson Damer.*] It also saves the breakage of coal?—It does. I believe it may be taken that the per-centage of waste between truck and barge is a difference of 30 per cent, as the result of repeated inquiries which I have made, that is what the traders tell me; in fact it is rather over that.

656. Mr. *Locke.*] You say that there is an estimate of 22,000 *l.* for putting all these locks in order between Staines and Oxford?—Yes.

657. Is it the case that there are two locks at many of these places, an old lock and a new one?—Yes.

658. What is it proposed to do; is it proposed to clear those entirely away and have one lock?—No, I think not, it is merely to repair the existing lock; the others are chiefly what they call weirs, and those would not take a great amount to put them in order.

659. That 22,000 *l.* is merely for repairing what there is now, is it?—Yes, repairing what there is now.

660. It does not include any improvement?—No.

661. Many of these locks are not of the best construction, are they?—No, they are not; they have wooden sides many of them and not walled sides; and the gates themselves of many of them want putting in order.

662. They let the water escape, do not they?—A great deal.

663. In fact, a great many of them are old worn out things?—A great many of them.

664. It wants 22,000 *l.* only to patch up these things, does it?—It would put walled sides to all those locks where there is wood now.

665. Brick or stone do you mean?—Brick walls, instead of the wood.

666–7. What would be the condition of a lock after it was done; the sides would be the same, I presume, as now?—Yes.

668. But they would be constructed of brick instead of wood?—Yes.

669. Then, as regards the gates, they are an expensive part of the locks, I presume; do you propose to make any new ones?—Yes; the gates are not particularly expensive things; all those Thames gates are made of wood.

670. Having

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670. Having regard to the best mode of constructing locks, supposing that any new ones were to be made, they would be entirely different from these, would they not?—The locks on the Oxford canal are merely different from these in the cases of the paddles, I mean the way that we draw the water; we draw ours through side paddles: but in these cases the water passes directly through the gates. In our lower gates we pass the water through them in the same way as in these precisely, but in all our upper gates we pass it through side paddles; the men have not to get on the gates to draw the paddles up; they stand on the towing path and draw them.

671. This 22,000*l.* does not, as I understand you, furnish locks of the best construction; it would be those that at present exist mended;—The locks would be sufficiently good for the navigation, undoubtedly.

Mr. James Castle, called in; and further Examined.

Mr. *J. Castle.*

672. Mr. *Dawson Damer.*] Is it not the case that Cricklade, Lechlade, Oxford, Abingdon, Wallingford, Goring, Streatley, Pangbourne, Reading, Wargrave, Henley, Marlow, the Wycombe Stream, the Ray Mills, near Maidenhead, the Taplow Gas Works, and Windsor, with most of the mansions and houses on the banks of the River Thames, discharge their sewage and refuse above the waterworks at Hampton Wick and Thames Ditton, which supply the metropolis?—Yes.

673. I believe that altogether there are about 32 towns which send all their sewage into the river?—That is a correct list which you have read.

674. Mr. *Henry Fenwick.*] Do you mean that the sewage comes down as low as Hampton, where the waterworks are?—I am not prepared to say that. I have not examined the lower district in a minute way, but I can say that in the whole of our pound locks we find a deposit.

675. I presume that this particular thing that you allude to is stopped to a certain extent by the locks?—Yes, it is.

676. Mr. *Dawson Damer.*] In fact the river appears to be a series of ponds into which each town empties its sewage?—It is. Of course I do not recommend the present system; I think it a most abominable one, and one that ought to be stopped immediately; but, from the present arrangement of our locks and weirs, the greater part of the deposit is stopped, and we have at all of them a ready way of taking it out.

677. Mr. *Henry Fenwick.*] Do you take it out as a matter of fact?—We are compelled to do so in many cases or we should not get the locks to work. Many of the pounds are completely blocked by it.

678. What do you do with that refuse; is it of any use?—We have never considered it in that light; we generally take it away, and throw it on the land.

679. Mr. *Locke.*] Then you do utilize it to a certain extent?—Not intentionally.

680. Have you seen the proposed sewer at Kingston?—I have not; that is not in my district; my superintendence only extends to just above Staines Bridge.

681. Kingston is considerably above a great many of the locks, is it not?—Yes, but they would be the locks under the Conservancy management.

682. They have got an injunction, have they not, in that case?—I believe so.

Mr. Frank Buckland, called in; and Examined.

Mr. *F. Buckland.*

683. Mr. *Dawson Damer.*] You are Master of Arts and Member of the College of Surgeons, are you not?—Yes.

684. Do you know anything about the fisheries of the River Thames?—I have paid considerable attention to a certain portion of the fisheries of the River Thames.

685. What part particularly?—Principally between Hampton and Sunbury Lock.

686. Have you not been above that?—Also at Windsor when I was there with the regiment.

687. Do you know anything about the quantity of the water which flows into the River Thames?—As regards that question we must first of all take the catchman basin of the Thames. I have been studying rivers lately, principally with regard to their capabilities of being utilized for fish, and it is very necessary to take what is called the catchman basin, and I find that the catchman basin of the Thames is 5,162 square miles; it catches water from that area of ground, that is to say, if the River Thames be represented by the centre of this paper which I hold in my hand, you would find all these little streams running down into it, and you would find the river at the lowest level; the Thames therefore drains 5,162 square miles.

688. Mr. *Henry Fenwick.*] The catchman basin is always the measure of the size of the river, is it not?—Yes.

689. Mr. *Hankey.*] Is it the size of the bed of the river, or of the quantity of land drained by that river?—The quantity of land drained by that river.

690. Mr. *Henry Fenwick.*] The catchman basin is the measure of the size of the river, is it not so in this sense that, if there are a dozen rivers in England, each having its separate catchman basin, each river will be in size in proportion to the size of its catchman basin?—Most decidedly.

691. So that when you want to know what volume of water there is in a river, in other words what is the size of a river, the proper way is to see what is the area of the catchman basin which is drained into it?—Decidedly so.

692. Mr. *Locke.*] How would you ascertain that?—From the map published by the Commissioners in which they give the catchman basin of every river in England. In that map, which is a most valuable one, is given the catchman basin of every river in England, whether it is five miles or 5,000 miles, and they also give the number of tributaries which go to form each principal river. The number of tributaries which form the River Thames is 15, and the total length of those tributaries,

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tributaries, if placed one after another, would be 463¼ miles.

693. Mr. *Dawson Damer.*] Can you state to the Committee whether the River Thames is likely ever to be a good salmon river, and whether it is likely to produce, if it is a good salmon river, food for the poorer classes in a cheaper form than at present?—My firm belief is, although it is opposed to that of almost everybody else, that within a very few years we shall have salmon in the Thames again if people will only take out abominations that are now in the river; in the time of the Ancient Britons there was salmon, why should it not be so again? And there are many gentlemen alive now who recollect catching Thames salmon; therefore the river is naturally capable of yielding salmon if the salmon is allowed to come.

694. I believe that the River Thames, taking it from its source to where it goes out to the sea, is clearer than any part of the Liffey, is it not?—I have never seen the Liffey, but the higher parts of the Thames are as fine for salmon as any river you would wish to see.

695. Are there not a great many gas works, and naphtha works, and paper mills, emptying their sewage into the river, besides towns?—Yes, I am sorry to say that there are. There are gas works about this part of London particularly, and I have received news that they are about to erect a naphtha work or petroleum work at Staines, and if that is not stopped away go all our fish.

696. I suppose you consider that this alteration of the drainage—taking it so much below London Bridge—will cleanse the river and purify it?—We hope so.

697. Have you been attending to the cultivation of the fish of the Thames, and in what capacity?—Yes. The Committee may not be aware that the authorities of the City of London have deputed to a society of gentlemen the guardianship of the fishes of that part of the Thames which is within their jurisdiction. The amount of river over which we have charge is 22 miles, and the Society is called "The Thames Angling Preservation Society."

698. Where does your province commence?—We begin at Staines Bridge, and we go down as far as the jurisdiction of the City of London goes, but we do not pay attention to it for preserving it for fish further than Richmond, because there is no fish to be caught beyond there.

699. Mr. *Neate.*] What about the whitebait?—Yes, that is a very important matter, of course. The society which I have mentioned has instituted a sub-committee, of which myself and Mr. Ponder are the acting members. We have turned out for those last four years a large number of young salmon and young trout.

700. Mr. *Dawson Damer.*] How many?—About 40,000 a year; 40,800 is the number this year.

701. Are there certain acids coming into the river from the gas works and from the naphtha works, and from the paper mills, which are very destructive of fish?—I have this morning carried on a series of experiments to explain that: first of all there is the refuse from the paper mills, which is excessively pernicious; I had some bleached lime from a paper mill put into a vessel in the proportion of four grains to the gallon; I put a salmon into it, and it died instantly. I hope that the Committee will pay particular attention to this matter, and stop these fellows from putting their horrible poison into the river to kill those fish; they are killing them with the chlorate of lime.—(*The Witness showed the effect of putting chlorate of lime into a bottle containing small salmon.*)—If a paper mill is close upon our operations where we are turning out the fish, it will kill them off very soon.

702. *Chairman.*] Supposing that the navigation were to be entirely destroyed, and that the river were to resume its natural state, without any locks or weirs, what would then be the condition of your fisheries?—Very good indeed; nothing could be better.

703. Then you do not want any locks or weirs?—No, they are our greatest enemies; the weirs have been made so excessively perfect for navigation, that they totally prevent the chance of any salmon coming up; the more perfect the weirs are made for navigation, the more certain they are to keep every fish out of the river.

704. Mr. *Dawson Damer.*] But if you have ladders will not that answer the purpose?—If we put ladders that will do. The City of London have been most liberal; they have erected, at their own cost, a ladder at Moulsley, and a ladder at Teddington, and now the fish will have a chance of coming up.

705. *Chairman.*] Then in order to have the river in a perfect state for fish, you would like to see the navigation put an end to; and, in regard to the manufactories, all the sewage and so on, dealt with in some other way than being thrown into the river?—I should like to see the navigation go on just as it is, *plus* some salmon ladders, very well.

706. You think, do you, that that would answer?—Yes; I would like to see a stringent law made that no chemicals of any sort or kind should be allowed to go into the river. I do not care about main drainage from the land; that does not matter, but chemicals, such as naphtha, are most injurious.

707. Does not it contribute to the health of the fish, if you keep up the head of water by those locks and weirs?—No, I think not.

708. Supposing the river were in its natural state, in dry seasons would there not be long parts of it mere narrow rivulets?—The fish would get out of them; they would get into pools.

709. Mr. *Neate.*] And would be caught?—If they were not guarded by keepers.

710. Mr. *Dawson Damer.*] You have great hope, have you not, that salmon ladders would answer the purpose?—If salmon ladders were put in, that would be a great thing; it is a great question in my opinion, because the angling of the Thames keeps so many poor men out of the pot-house; the poor men who feel oppressed by their work will go on a Saturday afternoon with a shilling return ticket to fish on the river, and you may see the bank lined with poor men catching fish, such as whitebait and other fish perfectly valueless in themselves.

711. *Chairman.*] They would catch the salmon too, would they not?—I would give them leave to do it if they could; that is a more difficult thing.

712. Mr. *Neate.*] How far up the river have you seen salmon?—I have heard of a salmon being caught at Oxford, but the great place for them

them would be about Laleham, and there is a splendid place at Sunbury.

713. Mr. *Locke.*] If the sewage continues as it is at the present time, would not that prevent the salmon coming up the river?—I do not think that it would; I think that they would still come if it were only pure sewage—clean dirt, as they say; but if there is any gas they turn back in a minute.

714. You think that the sewage does no harm to the salmon?—No; because when I was quartered at Windsor, I used to give the man who had charge of the great sewer, half-a-crown to turn on the sewer at a certain time in the day, and it brought the fish up; nobody would eat them afterwards, however; they did not like the notion of it. This morning I took two or three little salmon in a vessel, and turned in 8 or 10 bladders of gas, and the fish felt it instantly.

715. Unless something more is done with the sewage than at present, do you think that there could be any salmon high up in the Thames, seeing that all the sewage will be emptied at Crossness on the south side, and at Barking on the north, when the low level sewer, which is not made yet, is completed; do you think that if that state of things remains, it will be possible to have any salmon up the river?—That is what the Thames Angling Preservation Society are going upon; and they say that when that time comes, we shall have salmon in the river to a great extent.

716. Supposing that the whole sewage of London is emptied into the Thames, still the salmon will come up; is that your view?—Yes; if it is emptied quite low down.

717. Mr. *Dawson Damer.*] Would not the reason of that be this, that every 24 hours or so there is a continual change of sea water which comes in there, whereas previously to the present drainage it did not change more than once in three weeks?—Yes.

718. I think that the tide only came up to Teddington about once in the month?—Yes.

719. Mr. *Locke.*] Then you do not anticipate any evil from all the sewage being emptied into the river; it is merely from the different manufacturing works on the banks of the river that this evil arises, in your view?—Yes.

720. Mr. *Henry Fenwick.*] So that if you could get all the manufacturers to dispose of their refuse in some other way than by pouring it into the river, you would expect that, notwithstanding the ordinary sewage going into the river, salmon and other migratory fish would come up again?—I should be excessively disappointed if they did not.

721. Do you know the River Tyne?—I have been on it.

722. You know, perhaps, the enormous population on its banks?—Yes.

723. Are you aware that upon the Tyne there is a very valuable commercial export of salmon fish?—Yes, I have fished there myself with a net, using a horse.

724. Are you aware that in that fishery last year, no less an amount than 3,000 salmon were taken in one day, polluted as the river is by the works on it?—I was not aware of that.

725. Mr. *Dawson Damer.*] Have you done anything for the purpose of helping the fish to ascend the river?—We have represented the matter to the City of London, and in the most liberal way they have built two salmon ladders for us, one at Teddington and the other at Sunbury.

726. Higher up than that is beyond their jurisdiction?—Yes; if the locks were repaired, it would be easy for the engineer to put in a ladder of this kind (*exhibiting a model to the Committee*).

727. Mr. *Locke.*] The whitebait used to be taken at Blackwall?—They used to be, but are not now.

728. Have they diminished in size in consequence of the alteration in the sewage system?—The whitebait sent to the London market are the very smallest of the small. There are tons and tons of excellent human food thrown into the Thames by river fishermen, because they say that the London people will not eat them. There are five different kinds of fish that go to make the young whitebait; a number of those are thrown back into the river because they say that Londoners will not eat them, and this is about the size of the largest (*describing it*).

729. Mr. *Dawson Damer.*] What are whitebait; are they not the fry of every sort of fish in the world?—Yes, the young of the sprat are sold for whitebait. That (*exhibiting a bottle to the Committee*) is the young of a fish called the weaver fish.

730. *Chairman.*] The weaver is a salt-water fish, is it not?—Yes; but it comes into the mouth of the Thames to spawn.

Mr. William Ward, called in; and Examined.

731. *Chairman.*] What office have you held in the City of Oxford?—That of alderman.

732. What is your occupation?—I am a coal and slate merchant, and corn dealer as well. I am chiefly engaged as a coal merchant.

733. Are you an owner of canal boats?—Yes, a great many; I should think the largest in the midland counties.

734. Have you had anything to do with the use of steam power upon canals?—I had two or three years since, but I had the boats brought from the Moira colliery. I tried the experiment some years ago from the Moira colliery to Braunston only, but it did not answer so far as that, because our canal is a very narrow canal, only adapted for one boat. I am speaking now of the Oxford canal. My chief trade is from Ashby to Coventry and Oxford; although that is my chief trade, I occasionally take boats to Shillingford, and that way.

735. Do you think that steam power might be usefully used on the river?—I have no doubt of it; the Grand Junction Canal Company do not use steam tugs: the Grand Junction boat has the steam power in itself. They are steam boats, and have one boat, which carries about 20 tons, with steam power, and another boat lashed to it which conveys it through the locks. That could not be applied to Oxford, I think; but on the river it could be applied, I think.

736. Would not the locks on the Thames navigation be as great an impediment as on the Oxford canal?—They are barge locks, enabling two boats to go through at a time; consequently there would not be the same delay in their case.

737. The bargemen do not like the steam tugs,

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do they?—No, they have been used to working with their horses; I do not think we gave it a fair trial on the canals at first.

738. Do you know anything about the carriage of goods by canal, as compared with rail, in reference to the question whether certain kinds of goods are better carried by canal?—Heavy goods are better carried by canal; the inland coal is very different from the Newcastle coal coming to London; if that is broken it does not hurt, but, on the contrary, the coal coming to Oxford from Leicester, if broken, is of much less use. If it is shifted, as it is by railway in many cases, that injures it. Water carriage is generally the best for heavy goods; iron and coal will be the chief trade by canal, because there is no object in having a quick supply.

739. Do you think that if the river navigation were improved, the locks put into repair, and the tolls reduced, there would be a good traffic between London and Oxford over the Thames navigation?—I should say as far as London probably; I should say that from Oxford to Reading there would be a good trade, for this reason: it has been established many years before the railway, and every town has its wharf; Abingdon has a large wharf, where coals would be stacked ready for the winter supply. The same is the case at Wallingford, and at other places, and at Reading. I think that one may assume that there would be a good trade, from the very fact of the great trade that there is on the river now, notwithstanding the present way in which it is managed, and the unsatisfactory state of the flashes; it wants a different management altogether; I think the flashes very injurious, not only to the traffic but also to the land. If we have boats lying at Oxford in the summer time to wait and go down the river, according to the present Act of Parliament every Tuesday and Friday the millowners are obliged to draw for so many hours their water, and let it run through the locks; we go five miles beyond Oxford, and the water is there purchased. A man is sent forward to the next lock to wait there for so many hours; the man goes on again, and so the water is carried down with the boats; that is called flashes. In summer time, when hay-making is going on, I have known the whole of the country inundated with water, and the hay spoiled. I myself, I suppose, have done a damage of hundreds of pounds in one case by my boats, owing to that system of flashes; it is injurious to the navigation. My boats start from Oxford on the Tuesday, and they take all the water with them; there is no more water to be had again till the following Friday; this is only taking place in the summer time, as a rule; for three or four months it takes place. It is injurious to the millowners as well; I believe it might be arranged satisfactorily if the high-water mark was placed at a certain amount, and if there were a constant traffic, instead of only two days a week, which takes place now for four months in the year.

740. Mr. *Neate.*] When the river is so high that it is likely to cause floods, you do not want flashes, do you?—Flashes would create a flood of themselves in the summer. The present Act of Parliament gives power to the Commissioners to close the locks so many hours; you can keep the locks shut up, and the millowners do not dare to draw for so many hours.

741. What is a flash; will you illustrate the term?—We will start from Lechlade, where the river starts. If I wanted to bring a boat from Gloucester to Oxford I should come into the river at Lechlade, there the boat would lie for two days, perhaps; the water would accumulate to a certain height; when it got to that height I should draw that lock, and start off with two boats; I should send a man on to the next lock, and the miller who has the care of that lock is obliged to keep it closed for such a time.

742. Do you mean that even at the time when the river is not particularly full you cannot have water enough to carry your boats without overflowing the banks?—We could, but it has the effect of flooding the country frequently, from Lechlade to Oxford particularly.

743. That is the abuse of the thing; the navigation does not require that, does it; the navigation can be carried on, I presume, without the water ever overflowing the banks?—You cannot come down without a flash.

744. Mr. *Locke.*] You could not go on day after day; there would not be water enough?—No; the Act of Parliament fixes Tuesdays and Fridays at Oxford.

745. You are obliged to wait, are you?—Yes, till there is sufficient quantity of water to start with; you send a man forward first, and that man stands at the lock there till the water comes down; and then, when the boats come down to that lock, that lock is drawn and the boats go down to the next pound; the man below does not dare, according to the present Act of Parliament, to draw that lock.

746. Mr. *Neate.*] It is only a question of management, is it not?—Yes.

747. By better regulation you might secure a supply of water to the navigation without subjecting the land to the danger of floods, might you not?—Yes, that is one thing for which there should be a fresh Commission appointed, namely, to inquire into the flash question.

748. Mr. *Dawson Damer.*] How could you improve that state of things?—By regulating the powers of the millers. There ought to be a low-water mark as well as a high-water mark.

749. Is there not something of that sort already?—Yes, there is, but the millers do just what they please with the water. We have two mills below our place at Oxford, and the millers will work on day and night drawing water out of that reach.

750. *Chairman.*] They are independent of the authority of the Commissioners in that respect, are not they?—Yes; by the Act of Parliament they are only required to draw on Tuesdays and Fridays.

751. Mr. *Neate.*] The millers sometimes will keep the water back if it does not suit them to work, will not they?—You can make them draw it on two days of the week.

752. They ought to do it, but they neglect the law, do not they?—They work on night and day, and then the mill lies still for a day or two.

753. Are not they in the habit of disregarding the Act of Parliament in that respect?—The barge people take care of that, because they could not get down otherwise; they are liable to a penalty if they draw.

754. Do not the barge-owners sometimes complain that the millers have drawn off the water before their barges are brought down?—There is a great complaint made in that respect.

755. In your business you buy corn in London, do not you?—Sometimes.

756. Have you ever tried to send it by the Thames?—There has been very little convenience for sending it that way. There is a heavy timber trade from Oxford to London, and if the boats which now go back empty, brought goods, a certain traffic might be created, but very little would keep that navigation; there would be a trade to a certain extent from London to Oxford, instead of the boats going back empty.

757. Do you think that they would carry groceries?—Heavy goods generally, where quick traffic was not required.

758. Mr. *Dawson Damer.*] Do not these flashes rather disturb all the drainage and the sewage poured into the river?—No, I think not; it is rather an injury to the navigation, and no benefit to the mill-owners; it wants regulating, and a fresh commission, I think, should regulate it; the great evil of the navigation is the uncertainty of its trade for three or four months in the year; I have known a boat which never could move from Oxford for 10 days, because we never could get sufficient water for it.

759. Was that last year?—No; but there was a very great drought last year; the navigation is nearly gone from Gloucester to Oxford, and never will come back, I think, there; still the Commission ought to keep their eye upon that matter.

760. *Chairman.*] Have you ever had anything to do with the Thames Commission for managing the navigation?—I was one of the committee for the fifth district two or three years since.

761. You know, then, how the business is conducted?—Yes; it is not conducted at all, in fact; there is no one to look after the business; I forget how many hundred commissioners there are; it is left, of course, to a committee, and that committee generally have not much interest in the navigation.

762. You think that the system of management should be changed, do you?—Entirely changed; the persons who have an interest in the matter in all the different towns having an interest in the navigation should be appointed on the Commission; it is very important to these towns to have the navigation kept open, and I think also that on public grounds it would be a serious evil to give the navigation up; it is a certain check upon the railways, for instance, in their charges.

763. It is necessary that the charges upon the navigation should be reduced, is it not?—Yes, the old locks want regulating. The old locks might be bought up for a very small sum.

764. When you were on the Committee of the Commissioners, had you ever anything to do with the old lock-owners with a view to coming to terms with them?—The Committee was rather ornamental than useful: chosen more for their social position than from their knowledge of the navigation; it was chiefly left to clerks and others: it was falling to pieces when I belonged to it.

765. Did they appear to be taking any active measures to keep the navigation upon its legs?—We had no money to do anything with.

766. Did they try to get money?—I believe that they could do nothing.

767. Did they try to negotiate terms of arrangement with the old lock-owners to get rid of that difficulty?—I think not, nor did they try to make terms with persons interested in sending traffic down, such as the Oxford Canal Company, and other parties.

768. If there is not a material change made in the management, what do you think will be the consequence?—The locks will, of course, blow up, and the country will be inundated with water; if the navigation is not kept up it will be very injurious, we shall have the whole country full of pestilential ditches.

769. Mr. *Locke.*] You say that the country will be inundated; I should have thought that if the locks were blown up, the country would not be inundated, but that the water would flow down the river?—The banks of the river are higher than the meadows.

770. Mr. *Hankey.*] If the bed of the river is higher than the surrounding country, how does it drain the country?—I believe that the Thames has nothing to do with the surrounding drainage.

771. Mr. *Dawson Damer.*] It is the weirs which make the river so much higher, is it not?—I believe that the drainage of the land is quite independent of the navigation and the mills too.

772. You talk of the river being really higher than the surrounding country; the fact is, is it not, that it is the weirs which make the water of the river so much higher than the surrounding country, and if these weirs were done away with the river would dry up to a rivulet in summer, and the drainage of towns would come out on its banks, and would not be carried away by the river?—The locks keep the water up to a certain extent; if they were swept away it would be like a river that never had any navigation at all.

773. *Chairman.*] Do you know anything about the Oxford Canal going into the Thames?—Yes, it is a great feeder to it, of course.

774. Do you think that the Canal Companies might therefore be asked to contribute to the improvement of the navigation of the Thames?—I am one of the Committee of the Oxford Canal Company, and I think that we might be fairly called upon to assist in the matter.

775. You think that they might be fairly asked to help, do you?—Yes, they derive a considerable revenue from the Thames, and if the navigation of the Thames were swept away, of course they would lose that to a considerable extent.

776. I suppose that if the navigation were improved, and the tolls reduced, the Oxford Canal Company would get a considerably increased traffic?—Yes.

777. Do you think that they would respond to a call upon them to assist?—Yes, I think so, and I think the coal-owners as well, and the Coventry Canal might be asked, not the Ashby-de-la-Zouch Canal Company, perhaps, because they are connected with a railway. The coal-owners in Warwickshire and Leicestershire might fairly, I think, be called upon to contribute something, and I think that they should have some voice in the management.

778. What would you do with this great Commission; how would you reform it?—I would sweep it away entirely. Every clergyman, I think, on the banks is a Commissioner; every bursar of a college, and every head of a college at Oxford, all those are Commissioners by virtue of their office.

779. When you have swept away this Commission, whom would you put in this place?—Persons interested in the matter; one from Abingdon, one from Reading, and so on.

780. Can you see your way to get money enough to put the navigation into repair upon any security which the trustees can offer?—I think

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think that on public grounds the Government ought to assist in the same way as they did upon the Shannon in Ireland.

781. But supposing that the Government declined to assist, do you see your way to any sufficient securities that the navigation trust could offer?—There will be a certain traffic and a certain revenue arising from it, and as the locks only want repairing, I think that so many thousand pounds would be used, and an income still derived from it.

782. Do you think that such a case could be made of probable income that the public would advance the money to put the navigation in repair; would persons advance money upon any security that the navigation would present?—I think it rather doubtful myself whether you would.

783. Mr. *J. R. Yorke.*] Is there any company besides the canal companies which you have mentioned that would subscribe in the event of money being raised?—The coal-owners might be asked.

784. No other canal company would subscribe you think?—None, except the Oxford and the Coventry canal companies; but, on public grounds, I hope that the Government would not allow the Thames navigation to be swept away.

785. Mr. *Locke.*] You speak of the navigation being swept away, and of the country being flooded over with water, but there is nothing to flood it, is there?—The water is kept now in bounds.

786. By the locks and the weirs?—Yes.

787. If you took those away the water would not be kept in bounds, would it; it would run down into the sea; how can you say, therefore, that it would overflow the banks of the river?—I think that you would have the whole banks of the Thames in a swampy state for acres and acres.

788. Is it not a quantity of water that makes it swampy?—It is so, I think, in most weathers; there must be the same quantity of water coming down of course.

789. But it would go down to the sea, I presume; it would not be kept up there?—I should think that it would flow over the banks for miles.

790. Mr. *Neate.*] I believe that you were secretary to an association of which the late Mr. Pusey was the head?—Yes; in 1853 we had a Committee appointed; it was chiefly then as regards the inundations of the Thames; Mr. Pusey was the Chairman.

791. The object of that Committee was to consider the effect of the Thames navigation upon the agricultural interests near it, was it not?—Yes.

792. And you had a memorial presented, stating the objects you sought?—Yes, and a report was drawn up by Mr. Brian Wood and Mr. Pusey; it is an interesting account, inasmuch as it gives an account of the whole of the locks from Oxford to Lechlade, and the water they draw. Some years since we had barges, sailing vessels, from the forest of Dean, which came down to Oxford, being from 80 to 100 tons burden; the water was deep enough to bring vessels down of 100 tons burden.

Jovis, 11° *die Maii*, 1865.

MEMBERS PRESENT:

Mr. Bathurst.	Colonel Knox.
Mr. Dawson Damer.	Mr. Locke.
Mr. Henry Fenwick.	Mr. Neate.
Mr. Milner Gibson.	Mr. John Reginald Yorke.
Mr. Hankey.	

THE RIGHT HON. THOMAS MILNER GIBSON, IN THE CHAIR.

Mr. JAMES SIMPSON, called in; and Examined.

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793. *Chairman.*] WHAT are you?—A Civil Engineer.

794. Of how many years' standing?—I have been in practice upwards of 40 years.

795. I believe that you are connected with some of the Metropolitan Water Companies, are you not?—Yes, I am engineer to the Chelsea and to the Lambeth Water Works Companies, and I am also engineer to many undertakings of the kind in the United Kingdom.

796. Are you acquainted with the River Thames?—Yes, I know it very well.

797. In what way have you become acquainted with the condition of the Thames?—Some years ago I had the management of what is now known as the Grosvenor Canal; it was under my direction five years, and that, as well as my connection with the water companies, has led me to make many observations on the Thames, and I have also occasionally been engaged for landowners and occupiers on the river in connection with the railways and with the sewage.

798. In regard to the drainage of their properties?—Yes.

799. You are acquainted with the Thames, are you, from its source downwards?—Yes, I know it better in the lower than I do in the upper parts; but I have been several times in the upper parts. I also know something of it from the construction of the Reading Waterworks, which led me to be a good deal in that neighbourhood, and also at Windsor in connection with the waterworks at the Castle.

800. Do you know the condition of the upper navigation works above Staines?—Yes, they are all in a dilapidated state.

801. Are they in an imminently dangerous condition?—Yes, very much so. I should be apprehensive that many of the weirs and locks during a heavy flood would be liable to be washed away altogether. I have no doubt that the drought and the long duration of low water last year had a considerable effect on all the timberwork.

802. Supposing this navigation to be allowed to take its course without anything being done, what would be the consequence of allowing the river to return to its natural condition?—The channel would be altered, the banks would fall in, and new channels formed, and very great damage would be done, not only to agricultural lands, but also to the various properties all down the stream.

803. How would it affect the lands?—The banks would be washed down during floods, and the flood waters would pass over the land and furrow them, in fact forming new channels.

804. Would there be obstructions formed which would tend to throw the water back, to the injury of the agricultural land?—Yes; there would be obstructions for a certain time until the floods were penned up, and then they would either break through in other directions or wash the *débris* down the stream.

805. What was the main object of the original works in the upper part of the Thames?—To render the river navigable by weirs and locks to some extent; no doubt, originally, they were made to work water-wheels for mill purposes.

806. To let down the water beneficially and gradually?—Yes; they hold it back to a considerable extent, but at the same time that is often much abused by the mill-owners. There is a habit in many cases on Saturday night of opening the sluices until Sunday evening or Monday morning, and occasioning short water on Monday; that is not at all a good thing.

807. Do you approve of the present works?—They are old works; it is a question of restoration and improvement. I think that it would be advisable to restore them; of course they are not modern works; they are very old in some parts. It becomes a great question with me whether these sills should not be lowered and give the barges a greater depth of water. I think the traffic will prove sufficient to warrant it.

808. Are you of opinion that any further works would be necessary or advisable?—It is a mixed question, depending very much on what would be the result of restoring them upon the trade. I am of opinion that that trade would be restored, to a considerable extent, and probably justify a larger expenditure eventually than is here contemplated; but I should advise, in the first instance, the restoration of all these works, and that there should be an endeavour to recoup them by the increase of the trade if possible.

809. Are you of opinion that reservoirs would be desirable to be constructed below the sources of the Thames in order to arrest the floods and let them into the stream?—That would be one of the greatest gifts for this river we could have;

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we should by that means prevent the excess of floods and increase the normal flow, and instead of having that extreme shortness of water which we now experience, we should have (I think I am not too sanguine in what I say) from 50 to 60 million gallons a day, which would be an immense gift to the river. The plan has been successfully carried out in smaller rivers.

810. Mr. *Neate.*] In what river has it been done?—I have done it on one river called the Chew, in the neighbourhood of Bristol: we have enabled the mills by doing that to work 12 hours constantly and certainly, and without being obstructed by floods, excepting very extreme floods indeed, and that all the year round.

811. Was it at any great expense that that was done?—The reservoirs were expensive.

812. Do you know of any other rivers where the same thing has been done?—Yes, in many cases it has been done in the Midland Counties; the Turton and Entwistle reservoir was one case where it was done to a large extent.

813. *Chairman.*] You would arrest these extraordinary floods by reservoirs, and then let the water out of these reservoirs into the stream where the water was low in dry seasons?—Yes; but it would not be requisite, in my opinion, to let it out constantly; it would depend very much on the rain. Whenever the reservoirs were full, the water would pass down the river, and in short-water seasons, and other times when the river was below or above high-water mark, the water might be increased or diminished according to rules to be laid down by the Conservators.

814. What is the effect of extraordinary flood waters now upon the lands and upon the navigation?—They are a great injury to the lands, and flood large tracts of country; and as regards navigation, it is stopped then; you cannot navigate the Thames in floods.

815. These reservoirs would tend to prevent that state of things, would they not?—They would to a very great extent. We are in a different position from that which we were in some years ago. We have had land drainage very greatly introduced, and the consequence is that the water comes off the land quicker, the channels are more direct, and it would be very desirable that we should return to a state of things which would not allow the drought to be so long as it is now.

816. Mr. *Neate.*] Under the old system the land acted as a reservoir, did it not?—It did to a very great extent; you would sometimes see springs running there for five and six months which now cease to run in two and three months.

817. *Chairman.*] Have you formed any opinion as to what is the necessary immediate outlay for the restoration of the present works?—According to the engineer's report, he has estimated that at 32,000 *l.*, I understand, and I believe that would be quite sufficient to restore the present works.

818. Would that sum be sufficient to lower the sills?—I think that they might lower the sills 12 inches very well with that money. The majority of these structures are not expensive; there is a great deal of wood about them, and they can get plenty of wood in that country.

819. Can you give us any approximate estimate of what you think these reservoirs that you recommend would cost?—I have not gone into that; they no doubt would be very expensive, but considering the interests that they would benefit I think the expense would be comparatively small; everything would feel the advantage, from London upwards. As an off-hand estimate, and a very rough one, I should say 100,000 *l.* The land above Oxford is not very expensive. I do not think that it could become a land or rather compensation question of magnitude; there is plenty of materials to make banks with.

820. Are you of opinion that if the navigation works of the Thames above Staines were restored to a proper condition, the heavy traffic would be increased on that navigation, and that any that has left it would return to it?—I am decidedly of that opinion, and I may say, as a party interested, that I should convey a good deal by it. I have seen and watched the traffic with much interest, and from having been employed professionally on the River Lee, I have no reason to disbelieve what the engineer has told me in that case; the trade is considerable; on the Lee it has become a question of water, rather than of the trade notwithstanding the railway. Again in the Midland Counties, the canals still engross a very large traffic; but of course it is at a much lower rate than that at which they used to carry it. For instance, we can get things to Windsor now for 5 *s.* which used to cost 20 *s.*; indeed, some of them at 3 *s.* They must of course lower the tolls accordingly; but I do not know that that would be an objection. I have one practical example of it, which I may mention. At Kingston, where I reside, and where our works are, we are purchasers of coals to the extent of something like 12,000 tons a year, and we can get them by water from London at 2 *s.* 6 *d.*, and we pay 2 *s.* 6 *d.* for heavy goods by railway, or rather we paid 3 *s.* last time.

821. You can get your coals for 2 *s.* 6 *d.* now by the navigation?—Yes; our contracts are for all goods at 2 *s.* 6 *d.* if supplied on the river; and by choice a very large portion of our goods come that way. We look upon the river also as materially facilitating our operations with the railway company; we think that it keeps down the tolls, and that as a question of competition it is a good thing; they afford us facilities, I believe, that they would not do otherwise.

822. Do you think that a fair income might be derived from the heavy traffic on the upper navigation of the Thames?—I think so; and I think that my observation is borne out by what they do on the lower part of the Thames, because they certainly hold there a large traffic; the rates are reduced, no doubt, but still in the direction of Weybridge I can myself see that a large traffic goes on.

823. Have you considered at all what plan should be adopted for raising the requisite funds to restore the navigation to a proper state?—No, I have not; that is a part of the question which I have not considered; I think, however, that there would be very little difficulty about it. If I had this in hand, although I should have great objections to placing the river under the jurisdition of a joint stock company, I should say that a joint stock company would raise the capital for the works in a very short time; there is nothing to do but to show the probable income, and you would get the money.

824. Would it be right, do you think, to call upon persons who would derive benefit from the improvement in the works to contribute towards that expenditure?—I think it would; and by making all contribute something, the burden would become very light, and whatever might be

be the extent that it would appear, it would not, after all, be a large sum if we could bring all the parties to consent and pay. The present state of things induces landowners to act for themselves, and the works are very injudiciously done; at present they are embanking the stream above Oxford, which is a very wrong thing to do.

825. Do you think that they would so far recognise the benefit which would result to their land from the improved drainage, that they would be willing to submit to a small rate?—I do not think they would in the first instance; it is very difficult to convince landowners in that respect.

826. You think that it would be just, however, that they should contribute?—I do.

827. Mr. *Locke.*] You would charge the landowners, in fact, for the purpose?—I contemplate a very small rate.

828. And with regard to the millowners, would you charge them?—Yes.

829. And what other parties would you charge?—I should say that every interest upon the river should be charged.

830. All the manufactories on the Thames, for instance, would you include them?—I would only charge them as landowners.

831. Mr. *J. R. Yorke.*] Companies, I suppose?—The water companies pay now, and if they take more water they must pay more.

832. *Chairman.*] I suppose you are aware that the present income of the Thames navigation is wholly inadequate to do anything?—The income of the navigation above Staines is gone almost; I think that a very short time, say two or three years, will settle that question, and there will be nothing to show.

833. You think that you have to begin from the beginning, as it were?—Yes.

834. Do you think that the water supply of London must mainly be derived from the Thames?—No doubt of it.

835. And do you think that the navigation works on the Thames are important to keep up that water supply?—They are important, there is no doubt, to a very considerable extent; they now equalise the stream, and there are very considerable reaches in the river.

836. But do you think these navigation works important as helping in maintaining the water supply to London?—Yes, no doubt of it; they are important in so far as they maintain the channel, and also to some extent equalise the flow of water, by holding it back in the various pounds for a few days, sometimes for weeks. If we have rain falling during one week, and not in the next, they are very important in holding up the water.

837. In fact, the existing locks and weirs act to a certain extent, do they not, like those reservoirs which you have suggested?—They do.

838. And therefore, if they were all done away with and nothing else put in their place, it would have a very serious effect upon the water supply of London?—If that were to take place, the water at times would be very bad indeed; it would be a mere ditch.

839. Mr. *J. R. Yorke.*] Would the quality of the water be affected by the quantity of the sewage being increased in proportion to the volume of water?—No doubt it would have some effect, but the volume of water at present in comparison with the sewage is very large.

840. But if it were to dry up to some extent in the summer, I suppose it would be more affected by the sewage of towns, would it not?—Yes, no doubt of it.

841. Mr. *Dawson Damer.*] Have you thought of having recourse to Artesian wells for the purpose of maintaining the water supply on the same footing as the Artesian well at Paris which is now so bountifully supplying a part of that city, supposing that the navigation were not kept up enough to supply the metropolis?—I look upon those Artesian wells as rather philosophical toys than otherwise. Now take the well at Grenelle; the water is not very good, it is a greenish sort of water, but Monsieur Corot, the mechanical engineer, who gave me access to all the works and to the books, showed me distinctly there that the only reason they kept it was to please the citizens of Paris; they would not allow them after such an enormous expenditure to do away with it, but it was a very fluctuating supply, he said; they sometimes did not get a million and a quarter gallons a day from it; I said, "Monsieur Corot, how is it that you manage to supply this quarter of Paris from it?" and he said, "Come down here into the groins under the reservoir," and he showed me the steam-engine which supplemented the supply when the Artesian well was deficient. That steam-engine was supplied from the oldest aqueduct in Paris, the Aqueduct d'Arcueil. It is supposed that the original supply of the Artesian well is derived from the rainfall, and I think that that must be so. If we examine the pits for receiving water they are liable to fill up, and the water is liable to be diverted, and the quantity must depend very much on the rainfall eventually, but I do not attach great importance to Artesian wells; no doubt there will be exceptions, but to try to obtain very large supplies of water from Artesian wells is a mistake.

842. You think then that the water from Artesian wells has a good deal to do with the rainfall?—No doubt of it; the rainfall is the origin.

843. *Chairman.*] You are of opinion that these navigation works, to a certain extent, economise the quantity of water, and prevent it from running off, as it were, immediately after it has fallen?—That is my decided opinion.

844. Do you think that that is an important matter in relation to the water supply of the metropolis?—Yes.

845. Do you think that the keeping up of these navigation works has any effect upon the quality of the water; do you think that the running of water through the sluices of the pound locks and the weirs, improves and purifies the water?—No doubt it does it a great deal of good; the more we can expose water to the action of the atmosphere the better, and these navigation works impound water to a very great extent in the higher sources of the Thames; in the highest parts of the stream we have beautiful reaches of water. I have measured some 15 or 16 feet deep, many of them being 10 or 11 feet.

846. Having regard to the effect of these sluices and pound locks, you think that they tend to purify the water?—They do; and the falling over the weirs is also very beneficial.

847. Do you think that the navigation of boats, barges, and so forth, upon the river tends to prevent the growth of weeds and other things that contaminate the water?—Yes, to an immense extent; you do not find weeds growing where you have an active navigation.

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848. Have these weeds a prejudicial effect upon the quality of the water?—Yes; especially in the autumn of the year, when they are decaying.

849. Then keeping up the navigation, you think, has some small connection with the health of the water-drinkers?—No doubt of it.

850. Mr. *Dawson Damer.*] The use of small steam tug-boats would improve that by cutting the weeds up, would it not?—Yes; it would prevent them from growing, in fact.

851. Mr. *Neate.*] Would there be any danger of there being too few weeds in the Thames?—I think not.

852. A certain amount of weeds keeps up the purity of a stream, does it not?—Yes; they are beneficial to a great extent; but that American weed which we have had to contend with in the rivers and canals in this country for some years past, has been a very troublesome thing, and I am not quite certain whether it is not that which gives to the water occasionally a bitter taste. There is one plant, the Cara Flexilis, met with in mossy districts, which is a great nuisance, and pollutes the water very much.

853. There is no danger, you think, of there being too few weeds?—No.

854. *Chairman.*] Would you say that if these locks and weirs are done away with, the quantity of water, the river being reduced to its natural state, would be quite insufficient for the regular supply of the metropolis?—I do not know that it would be quite insufficient for the supply of the metropolis; but it would come down at times with such a very small volume, that it would not come down in the state of purity in which it comes down at present.

855. Do you know anything about the water-works that supply Windsor Castle and the Royal Farms?—Yes; I constructed the whole of them.

856. How far would they be affected by letting the navigation cease?—I think that so far as water for water power is concerned, we must lose it altogether; we have a water-wheel there, of 36-horse power, which supplies the entire Castle. We have a small steam engine also, which throws up water from filters at the river to the reservoir constructed on the hill at Cranbourne for supplying the Castle, in case of fire, but the working of the steam engine is objectionable to some extent, on account of smoke; we depend almost entirely on the water-wheel, and I consider the Romney weir at Windsor one of the most important weirs on the river; it maintains the dam of water which affords not only the means of supplying the Castle, but the towns of Windsor and Eton are dependent on it also.

857. Mr. *J. R. Yorke.*] What is the condition of that weir now?—It is in very bad repair.

858. *Chairman.*] That is Romney Island, is it not?—It is an island immediately below Windsor Bridge.

859. Do you know anything of the mode of management of the navigation of the Upper Thames above Staines?—I do not know a great deal of it, excepting from occasional communication with the late Mr. Treacher the surveyor.

860. You have not turned your attention then to the composition of the trust, perhaps, or their powers?—Not particularly.

861. Have you formed any opinion on that subject?—I think it would be an advantage if you could get gentlemen appointed who would attend. I dare say it may be different now, but generally when I have attended, there have been very few at the meetings; I have not had any occasion, however, to approach the meetings for the last 15 years.

862. Mr. *Neate.*] Are you speaking of the committee meetings or the Commissioners' meetings?—Of both; even in cases when there was a deputation from the Office of Works about that very place, Romney Island, some years ago, I went three times to Maidenhead before a sufficient number could be induced to attend to form a quorum.

863. *Chairman.*] You did not form a very favourable opinion of the management, I suppose?—Well, I did not at that time. I think, from what we have seen since, that it would be better if a paid chairman were appointed. I believe they elect now a certain number from various districts, and that might still be done, so that they could get them fairly represented; and I should say that the representation should not be so numerous as it now is, in order that you might have a good working committee.

864. Do you know anything of the management of the lower part of the Thames below Staines?—I have observed it. I believe it is managed very well indeed; in our communications with the Conservators we get every attention; everything is listened to, and is promptly done.

865. Are the works of the lower part of the Thames below Staines under the Conservators in good repair?—I think they are nearly all of them; some of the locks and weirs may want a little to be done to them, but not much, because they have been constructed in a more expensive style. The upper part of the river, like many other rivers, was begun in a very primitive style; for instance, not more than four or five years ago, I remember myself seeing barges pass over the shoals below Oxford, and that they were in the habit of driving cows and horses into the water, so that they could create a flash, and raise the water a few inches; that was a very common thing to do. Then again, on the Kennet Canal, you see things which supply mills; they are merely what you call gate-hurdles, hurdles put in as a sort of piling, and the weeds form against them, and form the head of the mill.

866. In fact, you think that the upper navigation of the Thames has not kept pace with the improvements of the day?—No, it certainly has not; it has been improved, but if it were improved a little further, I believe that would answer every purpose, and put it in such a state that the heavy traffic would return to it, because formerly we used to have a very considerable quantity of elm timber and other materials from the direction of Oxford; we do not see so much now.

867. You are of opinion, then, that it is worth while to make an effort to restore the navigation?—I think so, within a reasonable expense.

868. Mr. *Henry Fenwick.*] I think you have said that your experience of the management of the Conservancy Board is a favourable experience?—Yes.

869. Their works are efficiently maintained?—Yes; I think they might do more provided they had a greater income, but they started under disadvantageous circumstances. I may say that I can never forgive the parties for letting the

Crown

Crown have that 5,000*l.* a year, or whatever the sum is which they have from the Conservancy fund. I think the river wants every penny of that. It was said the Crown's right never died; my idea is that it never had any existence, and it was the admission only of a legal fiction which established the claim, admitted only to prevent the refunding of monies improperly withheld and received by the City of London, as the old conservators of the river, from year to year, during a very long period.

870. Do you know anything of the financial position of the Conservancy Board?—No, I do not; I understood that their income exceeded 13,000*l.* a year, but I have not heard that lately.

871. Are you aware that they are paying off, year by year, some of their debt?—I have heard so.

872. At the same time giving satisfaction to the public?—Yes.

873. With that experience of the Lower Conservancy Board, do you think that if they could be induced to take upon themselves the management of the Upper Thames, similar satisfactory results would take place?—They might; but there would be the disadvantage, in my opinion, of gentlemen being engaged in business pursuits in London, and I think there would be difficulty in forming the board; at least, I should have my doubts about it. I think if you could induce those locally interested to undertake it, it would be better.

874. We have had evidence from you that the Board of Commissioners, as at present formed, did not even meet with the regularity they ought?—I spoke then of some few years ago; I do not know what they do now.

875. Whereas you say that the lower Conservancy Board perform their duties efficiently?—Yes.

876. Would you not say, therefore, that they would be likely to perform the duties of management of the Upper Thames with efficiency also?—They might be likely, certainly, to do it, but there is the question of throwing overboard a very large local interest.

877. You, perhaps, with other witnesses, think that a continuity of management on any navigation system is desirable?—If you mean that local committees might be appointed, I think that local committees, in many instances, do not work well. I know that in the case of the road trustees of Surrey there is a considerable difficulty, because the gentlemen meet in one part of the county and object to what is done in another part, and there is considerable conflict; it is very desirable to have one mind, if possible.

878. Supposing that that one mind was the general Conservancy Board for the whole of the Thames, not working by a committee but by the Board itself, would that meet your objection?—If they really would make a matter of business of it, that would perhaps meet the objection; there is a great deal of difficulty now in getting gentlemen, who have engagements in London, to meet at Oxford, say, or any particular part of the river.

879. The Thames Conservancy have a paid chairman, have they not?—No, I think not; the Metropolitan Board of Works have; the Thames Conservancy may have, but I am not aware of it.

880. I think you have said that you have not turned your attention to the financial position of the Commissioners of the upper part of the river?—I have not.

881. As a general proposition, would you not say that it would be difficult for them to borrow money, knowing, as probably you do, that they have a debt now of 88,000*l.*, upon which they pay no interest, and that all their works are in a bad state of repair?—Yes, no doubt it would be difficult; it is one of those cases where gentlemen may come forward themselves, and work the Commission up to a better state.

882. The only security for borrowing money would be some future hope for increase of trade, would it not?—It would.

883. That would be hardly security, would it, such as you would lend money upon?—No; that security has in fact to be created, and the money earned.

884. Supposing that the Lower Thames Conservancy Board were to obtain possession and the management of the upper reaches, possibly you would think that they would be in a position to give security for the borrowing of sufficient money to put the works in an efficient state?—Yes, if they coupled with it the security of the lower tolls by way of mortgage or otherwise.

885. Upon the supposition of the desirableness of improving the navigation of the upper reaches, not only for interests involved there, but for the supply of London with water, would not that afford a strong reason on public grounds why the Lower Thames Conservancy Board should take the management of the upper reaches?—I think it would; but at the same time I see great difficulty in throwing overboard the local upper interests; it would be a very strong measure in the case of a river of 150 miles in length where there are local influences and some peculiar interests, to attach it to the lower portion.

886. We have it in evidence that the traffic on the Lower Thames has diminished in consequence of the bad traffic arrangements above; is that your view also?—I have no doubt that it is the case.

887. Is there not a manifest direct interest on the part of the managers of the Lower Thames to improve the navigation and traffic arrangements of the upper part?—There would be, no doubt.

888. That being so, it would be another reason, would it not, why it should be added to their jurisdiction?—Yes.

889. Might you not also make an addition to the Conservancy Board as at present constituted, by a few representatives from the upper parts of the river?—Yes.

890. That perhaps would do away with the objection which has been suggested about those parts not being represented?—Yes.

891. Do I rightly gather that upon this subject your opinion is this,—that if you added to the present Conservancy Board a few members representing the Upper Thames, such a Board would be a good Board to manage the whole of the Thames navigation?—Presuming that you could command attendance, I think that that would be a very good Board; I am presuming at the same time that the interests of the Upper Thames were sufficiently represented, for, after all, you may depend upon it there are many interests of landowners and millowners which must not be lost sight of.

892. Such interests are also involved in the Lower Thames navigation, are they not, below Staines?—Yes.

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893. Have you heard of any neglect of their interests on the part of the Conservators?—No.

894. Probably you would expect the same absence of neglect in case their jurisdiction was extended?—I dare say it might be; but I may be allowed to say with regard to the Conservancy of the Lower Thames, as at present conducted, that it is a novel commission, and new brooms sweep clean; I think they have been on their best behaviour.

895. Mr. *Neate.*] Some of the water companies are now supplied from the river between Staines and Teddington, are they not?—They are.

896. And you would conceive, would you not, that the water they get depends, in a great measure upon the proper management of the river above Staines?—Yes.

897. Do you conceive that part of the water in fact which is sold to the London companies belongs properly to the upper part of the river?—It has passed from the upper parts, certainly.

898. Supposing that you were at great expense in making a lake to keep up a stream below your lake in the summer, and that immediately below your lake somebody erected waterworks and sold the water, should you not think that you were entitled to share that money?—Yes; it is a question, perhaps, of a peculiar kind; if there is water flowing through an estate, I have no right, even though it is on my estate, to make use of it for waterworks; I cannot carry it away; I may use it there and then, but I cannot carry it away either in water carts or in any other way.

899. But if you accumulate it to any extent, what then?—Then it would be subject to the law in the Acts of Parliament.

900. As a fact (leaving the question of law), do you think that the supply to the water companies depends to a considerable degree upon the maintenance of the works above?—To some extent it does, and if they were not kept up the supply would be prejudiced.

901. Even if there are no locks above Staines the same quantity of water would come into the river in summer, would it not?—It would.

902. Would it all fall in the same way down to Staines as it does now?—Yes.

903. Would there be no obstructions to go over?—Yes, very great; there would be nothing to equalise the water; floods would come down very irregularly indeed. For instance, if you take a stream where weirs have been introduced you generally find that the velocity is about 2½ miles an hour, but we may have floods in the Thames coming four or five miles an hour.

904. Would the same quantity of water pass, for instance, over Teddington Weir as does now?—Yes, but then it would pass over in a very different way, and not so beneficial a way; it would come by fits and starts.

905. Would none of it be detained to fill up the pools in the river?—Yes, no doubt of it, and then those pools would overflow sometimes.

906. By means of weirs the lower part of the river gets the benefit of any increase, does it not?—It does.

907. Otherwise it might not get the benefit till after a considerable time?—Just so.

908. Mr. *Dawson Damer.*] You object very much to this embankment above Oxford. I believe it is 40 feet above the river high-water mark?—Yes.

909. Is it more prejudicial than weirs?—It is very much more prejudicial than if weirs were made of a proper kind; becomes, in effect, confined to one channel for flood waters, and that of very limited area; and I believe that it is insufficient for large floods, and that those banks, either there or elsewhere, will be washed away. I do not think that portion of the work, as I saw it carried on, has had the engineering consideration given to it that it ought to have had.

910. You will not have artesian wells at any price, you say?—No, there has been more money spent on that toy, if I may so call it, than on anything I know; the sum spent on it, to my knowledge, in London, would have constructed works larger than the present works are. In London, there is many a brewer who has spent 15,000 *l.* or 20,000 *l.* in artesian wells; we hear of the successes of them and not of the failures. At one time of my life I had a gang of men to try the thing; I was pleased with it, but I found that there was uncertainty in dealing with the men, and at last I made up my mind that no man of character and capital would have to do with it. What with dealing with the men, and the difficulty of understanding the character of the strata, notwithstanding all our geological knowledge, we could not do it.

911. I believe that that artesian well, last year, sometimes carried up a great quantity of water at Paris?—Yes, but that is the thing I complain of, the fluctuation.

912. You believe that there is a connection between the rain-fall and the artesian well?—Yes.

913. Which has been doubted till lately, has it not?—Yes, but the proof is almost positive, I think, now. There are numerous instances which I could refer to myself, where I have no doubt in the world of the connection.

Mr. William Loynes, called in; and Examined.

Mr. *W. Loynes.*

914. *Chairman.*] What is your business?—I am a timber, slate, and coal merchant, and lime burner.

915. Where do you reside?—At Eton, on the banks of the Thames.

916. On what part of the Thames do you carry on your trade?—At Eton; and likewise I have a lime-kiln this side of Marlow, which they call Quarrywood.

917. You trade between London and Marlow, and London and Windsor, do you?—With regard to the lime-kiln, we burn the lime up at Marlow, and bring it down to Eton. Then I trade from London to Eton with timber and coals and slates, and those sort of things.

918. Can you tell us anything about the state of the navigation?—Yes, I can, and I have some reason to do so. I have had a barge which has been about a fortnight coming from the docks at London to my place, on account of the bad state of the river.

919. What do you mean "by the bad state of the river"?—On account of the insufficiency of the water, the locks being in such a bad state that they could not hold the water. I have seen the river at my place in such a state that you might walk across it, not above three years ago; and up at another spot by Maidenhead I could jump across at different times in the summer when the water has been very low.

920. Mr. *Neate.*]

920. Mr. *Neate.*] Do you mean that you could go across the main bed of the river without wetting your feet?—No, not without wetting my feet.

921. *Chairman.*] Do you attribute this state of things to the defective condition of the works?—I do, for I have seen a great deal of it. I have examined Windsor Lock, and I have examined Boveney Lock, higher up, and they are all in a very bad state.

922. Are you of opinion that the traffic on the river would be increased if the works were restored to a proper condition?—Very greatly. I should do double myself. We had three weeks ago goods come down by rail, and we had 15 or 16 pots of breakage in only one truck of goods.

923. Do you think that they would send light goods in any quantity by the river?—I am sure of it; they would put on a much lighter barge, a barge which would work much quicker than these large barges do. I have had some barges up bringing 80 or 90 tons.

924. Do you think that this navigation, if put into a proper state, could compete successfully with the railway?—I do.

925. Will you explain to us what advantage you would obtain by taking the navigation instead of the rail?—We will take timber from the docks, for instance. We could fill our barges in and bring them direct up to our works. In the case of coals, for instance, and cement, because all the cement wharves are down by the water side, and iron for instance again, and then you might take hogsheads of sugar from the docks. In the case of the railroad, you have to cart them from the docks to the different railways, and then bring them on, and it costs as much to bring the goods in London from the docks to the rail as it costs me to bring them to Windsor.

926. You would save the cartage from the wharf to the railway station?—Yes. Then there is another thing that we have to pay extra; we have to cart all the goods away from the rail to our place. The coals could not be carted to my place from the rail under 9 *d.* a ton, and we could have them taken out of the barge for 6 *d.*, and then they would be close against the premises.

927. Then you would go more largely into business on the river if these works were put into a proper state?—I should; for I am afraid to undertake to do more than we are doing, on account of the state of the river now. For instance, now, I have known it take a fortnight for a barge to come from the Docks to Windsor, and I have seen barges lying for three or four days, and not able to get away at all.

928. Do not you find the tolls on the navigation rather high?—Yes, there are old lock-tolls, and what is called the "winch," which we have to pay at Maidenhead. We have to pay for each barge coming through; it is what they call the winch-toll. I objected to it, and the man there said that he would not allow the barge to come through. So I protested against it, and made him give my man a receipt for the money.

929. You must have the tolls lowered, you think, as well as the works improved?—Just so. Likewise, I think that those old locks ought to be done away with.

930. Do you know anything of the state of any particular lock in your own neighbourhood that is particularly dangerous?—Yes, the Windsor Lock, for instance. I have repeatedly had occasion to go that way, and on account of the barges stopping so long, I have been there many a time, and I have seen the sill which the gates work over rise about two feet; the sheating, I may call it, from the sill rose about two feet, and then when the barge has gone, that goes down, and then when the barge went over and left it, that rose again. I have seen the water bubble there just the same as in a spring.

931. Do you know much about the charges for these old locks; are they a great drawback on the traffic?—There is not the least doubt about that; I think that there would be more than double the traffic if the river were put in a proper state. Then there is another thing; it is the ballasting; the middle part of the river is the highest, and the deepest part of the river is close by the banks. Sometimes it is the case that I have three or four times in the course of a day occasion to go to Windsor from my place, and in making that passage I find that in some parts of the river there are holes 12 feet deep, and in other places not above five or six feet. Against the Home Park, for instance, there is another place where the barge has got to go the further side of the river to come along, if there is any water at all in it, and in the middle part of the river there is scarcely any water at all. And then there is another place that is against what we call Clewer Point; the barges have got to go right to the other side; there is a post where the horses come round, and as soon as ever the horses pull this way (*describing the same*) they pull the barge right on to the bank.

932. You have heard some of the evidence given before the Committee, I think, as to what would be the consequence of the abandonment of these navigation works altogether, and letting the river go into its natural state; what is your opinion upon that point?—I heard a gentleman examined here on Tuesday, and I think that his remarks altogether explain it. "If the locks were allowed to go entirely, the banks would be overflowed," he said. True, they would be so in the case of a flood; but then in the summer time, when we have got no water, those locks keep the water back, and assist us. Now, if the locks were entirely done away with, and the flood were to come, we should be overflowed a great deal more than we are now; because, for instance, where I am living now, I built my house on the wharf, and I thought that I would take great precautions about it, but the water came within four inches of the floor. I built my house about 13 years ago.

933. Mr. *J. R. Yorke.*] That was in the year 1852, was it, when the great flood was?—Yes.

934. *Chairman.*] Do you think that steam might be used on the navigation?—Yes; I think that it would be of great benefit in this case; for instance, the barges come up to Old Windsor Lock; the horses have to go across the river; to go across the Cobbler those horses have to come right round by the Home Park, and they come over Windsor Bridge into the Brocas; I should say that that delays the boats two hours at least. Then, again, if the barge goes up to the lime-kilns, the horses have to cross the river twice, so that there is a great delay in the case of the horses being taken across the river in boats.

935. If steam-tugs were used, your business would be increased generally, would it?—I think so, and the same thing would happen in the case of many others besides; because, in the case of stones they all come by rail now, the barges will not

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not take them up. I had a case the other day in which I wanted to have some charcoal, and I had to go 30 miles before I could get a boat to take it up.

936. Mr. *J. R. Yorke.*] Has the number of barges decreased of late years?—Yes; I know a person living at Old Windsor, who had three, and he had to take one off on account of the delays.

937. *Chairman.*] The owners of barges will not bring their boats up the river, you say?—Not at all, if they can get anything else to do on the other part.

938. Colonel *Knox.*] Is not that owing to this fact, that the barge-owners know that the insecurity of the river works is such that any break-up in the upper part of the Thames would completely stop the navigation, and thereby they would be wholly thrown out, and their capital lost?—Certainly, that is so.

939. *Chairman.*] What description of goods are conveyed better by water than by rail?—I should think almost everything that lies beside the water.

940. Speaking, not of cost, but as to the effect upon the goods of the mode of conveyance, what description of goods is it preferable to send by water rather than by rail, if you had your choice?—For instance, timber; I have a great quantity of goods coming out of Yorkshire, tiles and different sorts of goods; I should prefer the water for that, because then we can put our barges direct by the side of the billy buoys, and they could come direct up; but the billy buoys hold more than the barges, and they will not put them in any barges that can come up to our place.

941. What goods require water carriage more especially; you mentioned charcoal just now; is not charcoal one thing that is better carried by water?—Yes, on account of there being so much more breakage on rail than there is on boats; they would not send it by rail. I wanted them to send it by rail, but they would not take it.

942. Chimney-pots, tiles, and things of that kind are better sent by water, are they not?—All those sorts of things, because there is more breakage on the rail. Only a fortnight ago I went to the Railway Company to ask for an allowance for breakage; they would not allow a penny; there were 15 or 16 pots broken in one truck.

943. Is it a general feeling that if the navigation were to end, it would give too great a monopoly to the railways, with which the navigation now competes?—It is indeed; we think that the monopoly of the railways is great enough already. I do much myself in the way of receiving goods on the South Western Railway, and I know something of it.

944. You think, therefore, that doing away with the navigation would be an injurious thing in that point of view?—Yes. Then too, in the case of the Eton young men, if the river were done away, they must find some occupation, and they would be up to something which would be mischievous.

945. Mr. *Hankey.*] Why should the river be done away because the locks were taken away?—Because the water would not be there.

946. Does not the water come from the valley of the Thames into the bed of the river?—Yes; but in the dry season it would run off so rapidly, that there would not be any left.

947. *Chairman.*] You think, do you, that in dry seasons, the river would be reduced to a ditch?—Yes. For Eton school, as I have already said, I think that it is a very great benefit.

948. What did you do with reference to this charcoal of which you have spoken?—I was forced to beg and pray a man here to let his barge take it.

949. They would not send it by rail you say?—No; I went to Mr. Perkins, the managing man in the Park, and he said that he would prefer sending it in this way, because the barge had to deliver it into a steamboat to go to Scotland. If they had to go by rail, they would have had to take it from the rail to the wharf, and then unload it from the wharf to the steamer.

950. Colonel *Knox.*] With your experience, do you know the time that it takes a barge to come from the Pool up to Windsor?—I cannot say. I had one which was a fortnight coming up.

951. To follow that out, could not that time be very much accelerated by the adoption of steam?—Certainly; I should think that a steam-tug would bring a barge up there in between 35 and 40 hours.

952. Is it within your knowledge that, in sending goods by the railway, they are considerably delayed, from the company not being able to forward them on account of the interference with their passenger traffic?—Yes; I have got a quantity of elm, for instance, lying at the Great Western. I called to see if I could have a truck, and they could not tell me when I should have one; and not only there, but on the South Western that has happened; my carts have been there repeatedly, and have been obliged to come away again.

953. If the Thames were put into a thorough state of navigation, so as to enable steam to be used on the upper parts of the Thames, in connection with the Conservancy, do you think that water carriage could, under existing circumstances, compete in time with the railway?—I am sure that it could. I am sure that that is the feeling all round us.

954. *Chairman.*] It has not a chance under present circumstances, has it?—Not at all.

955. Mr. *Neate.*] There are a great many shoals, I understood you to say, below Staines, between Staines and Teddington?—No; I am speaking only of the locality of Windsor, and just round there.

956. But you know the state of the river between Staines and Teddington, do you not?—No, I do not.

957. You bring goods up from the Pool to Windsor, do you not?—Yes; but I have never been below that part to examine it, or anything of that sort.

958. The shoals that you spoke of, then, were above Staines?—Yes.

959. From the improper way in which the river has been dealt with?—Yes, in regard to ballast; it is in a shocking state.

960. And with a steam-tug you have greater facility of steering the barge than with a horse, have you not?—Yes, much greater.

961. You would have a greater facility of avoiding shoals?—Certainly.

962. How far up does the tide take you from the Pool?—I do not think that the tide flows much above Richmond.

963. You begin to use horses there, do you?—Yes.

964. Does one tide take the boat up to Kew?—That

—That I do not know; I think that it is more than one tide.

965. Colonel *Knox.*] You mentioned that at Maidenhead there was a winch-toll, and that you resisted that toll?—Yes.

966. Has Mr. Venables that toll?—No, Mr. Fuller.

967. Do you know of any other cases where those winch-tolls are still maintained?—No, I do not.

968. *Chairman.*] Do you know anything about the management of the upper navigation; have you had anything to do with the authorities?—I have at times. When I took my limekilns first, I met the Commissioners at Windsor; I said I would engage to bring so many hundred tons of chalk and lime from my place, and I wanted them to lower the toll, but they would not; likewise I have tried to lower the tolls from London, but I could not get anything taken off from them.

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Mr. JOHN HILLIARD, called in; and Examined.

969. *Chairman.*] WHAT is your business?—I am a timber, coal, slate, and salt merchant; a general merchant, in fact, in partnership with my brother.

970. Do you carry on any trade by means of the Thames navigation?—We run canal barges from Oxford to Wallingford; we used to have barges on the river, but they have been off some time.

971. Do you complain of the state of the works on the river?—Yes, certainly.

972. What have you to say upon that subject?—They are, every one of them, exceedingly dangerous, and if any one failed our traffic would entirely cease directly, and the boats be thrown out of use and rendered valueless so far as traffic is concerned; the works are old and decayed.

973. Do you complain of the tolls that are charged?—We complain most of the old lock dues; they are the greatest grievance that we have to complain of, inasmuch as they are professedly raised to keep the water back and help us down; but, in point of fact, the millers stand and laugh at our men when they cannot go on, after they have paid for getting the water. We had a case last summer where it cost 18 *s.* (I think there were six boats to share it) to get the water; and at Sandford Lock the miller's man stood and laughed at our man and said, "Thank you for bringing the water;" and he had to lie there till the next flush.

974. Do you think that that prevents the traffic from increasing?—Most undoubtedly.

975. Do you think that if the works were put into good order and the tolls reduced, that the traffic would increase?—Yes.

976. Notwithstanding the competition of the railways?—Yes, certainly; because a different sort of coal comes by canal from that which comes by railway, and comes better by canal.

977. It is carried in better condition by the water conveyance than by the railway?—Yes.

978. The breakage is less, is it?—Very much.

979. Would coals brought by the river be worth more than coals brought by rail?—If I were delivering it to your cellar or any other place, I should rather gave 1 *s.* a ton more for coal by canal, because of the shifting by rail.

980. There would always be a great deal more uncertainty by this water navigation than there would be by railway conveyance, would there not?—I think that the water, if the works were in a proper state of repair, would be very much more certain than the rail.

981. How do you make that out?—The moment that an accident happens on the railway (we had several last season) every goods train is detained on purpose to work the passenger traffic; therefore everything is ordered to be stopped at the far end, and we get no supply, in fact; but, with the exception of frost or flood, which never lasts very long, the river, if in a good state of repair, would be all but certain, if the men would choose to avail themselves of it.

Mr. *J. Hilliard.*

982. Do you think that the railways are so overburdened with traffic that they are obliged to delay it from that cause?—I believe that they are overburdened all down the lower district now.

983. They are obliged to delay the traffic, are they?—They do delay it in many cases.

984. Can you give us an instance?—The other day I had one; it was from a breaking down; I had the advise of a truck of coals that I had ordered particularly; it was advised on the 21st of April, and for eight or nine days I could hear nothing of it; it ought to have been up within 24 hours. After some time I heard that it had broken down (I do not know where), and that the truck had been transhipped. There is a delay caused if there is any accident, by getting the trucks taken off, having to unload it, and get it off again.

985. What are the Commissioners' tolls and the other charges on a 30-ton barge from Oxford to Wallingford?—From Oxford to Wallingford the Commissioners charge me 1 *l.* 17 *s.* 6 *d.*, and the old locks 1 *l.* 0 *s.* 9 *d.* The old locks are the same, whether it is 30 tons or five tons; so that if we had to lighten a boat (as we had to do last year at Oxford frequently), and come down with 15 tons, we paid more to the old locks, which are of no use to us, than we did to the Commissioners.

986. The Commissioners' tolls are per ton, are they not?—Yes, per ton; the old lock tolls are, loaded or empty, so much for every five or ten tons; a prescriptive right they call it. I could not explain how that arises.

987. It is taken on the tonnage of the craft, is it?—It is on the size of the boat. They say: "Your boat will carry 30 tons; you must pay so much."

988. Empty or full, you pay the old locks the same?—Yes.

989. Mr. *Neate.*] Do you pay if the barge is quite empty?—Yes, we pay the old locks both ways, not up and down.

990. You say that if there is nothing at all in the barge you pay?—Yes, for one voyage. If I go empty, I must pay 1 *l.* 0 *s.* 9 *d.*; if I go loaded I must pay no more.

991. *Chairman.*] For which there is no return, is there?—There is no return whatever.

992. Are you of opinion that that charge ought to be got rid of?—Some of the old locks are the properties of the persons who take the tolls, and they are liable to repair them to some extent, and then they are available, possibly, to hold the water back.

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993. They do not make any contribution to the pound locks, do they?—Not the slightest, as far as I understand.

994. Is there a feeling that, if matters are allowed to remain as they are, the navigation will come to an end?—Decidedly so, and that we shall have a swamp; in many parts, nothing but a wide pestiferous swamp.

995. These old lockowners would get nothing at all, would they, in that case?—The millers would be the greatest sufferers. The old lockowners would lose their tolls; but then they would lose their liability to repair. The millowners would be very considerable losers, because in almost every case where there is a mill there is a weir above that mill, where there is a supply of water.

996. You do not know what this liability to repair is, as a set-off to the tolls?—No, I do not. I only know that they are liable, inasmuch as I have supplied one or two of the parties with materials to do it.

997. Mr. *J. R. Yorke.*] Are they, as a matter of fact, in repair?—No, they partake of the same character as the navigation works; if one pound lock gets bad, the other is almost sure to go, as a matter of course.

998. If this liability exists, it does not appear to be enforced in any way?—I think that the only way to enforce that is that, if they do not keep the water back, they must lose the use of their mills.

999. *Chairman.*] Do you think that, if proper facilities are given to the population on the banks of the river, that will afford a good trade?—I certainly think so.

1000. And yield a fair income?—Yes, I should say so. Of course, I have not gone into any calculation as to what the income would be, but there is a very large district of country lying close to the River Thames, between Oxford and Wallingford even. Then, there is a large district between that and Pangbourne.

1001. You have not gone into any account which you can give to the Committee of the probable increase of traffic?—No; I do not know enough of the trade to do that.

1002. Mr. *J. R. Yorke.*] This increase in the navigation would come, would it not, from all those villages or towns which are situated on the banks of the river, and would have to pay considerably for cartage to the railway?—Yes.

Mr. WILLIAM SHUTTLEWORTH CLARKE, called in; and Examined.

Mr. *W.S. Clarke.*

1003. *Chairman.*] WHAT are you?—I am a Coal and Salt Merchant at Benson.

1004. What other trade do you carry on?—I take a great many flints up the river; flints and gravel for the Highway Boards.

1005. Do you carry anything else on the river?—Sulphuric acid from Birmingham.

1006. Do you prefer the water conveyance to the rail?—Certainly.

1007. Why do you prefer it?—Because it carries evener and better, with less breakage.

1008. Does it pay better now to send coal by the water than by the rail?—Yes, I can get it cheaper by boats than by rail; at least, the coal that I want.

1009. Are you speaking now of traffic sent over the Thames navigation?—Yes, and the canal.

1010. What canal?—The Oxford Canal is the canal which we work on, and then into the Thames.

1011. And down the Thames?—Yes, down the Thames to Wallingford.

1012. Is there a good deal of breakage by truck?—A gread deal.

1013. Do not the railway company make you any compensation for that?—Not a bit; it is the shunting that does a great deal of it; dashing and shaking it about.

1014. Is there any of that kind of traffic which the railway companies do not care to have?—Yes; they do not care to have the sulphuric acid; in fact, the carboys break, and they will not pay for them.

1015. They prefer not to carry them?—I do not think they care to carry them, except at a high rate.

1016. Have you anything to tell us about the state of the navigation and the obstructions that now exist?—The principal obstructions are the old lock owners. I think that in short-water time they are the very men who cause the difficulty; they will not pen for the flash; by the old Thames bye-laws, they ought to pen for a flash on a particular day, but instead of penning, we fetch the water down, and they use it; they will not close their mills, and we cannot get to high-water unless they pen; it needs some rule over them to compel them in short-water time to pen for a flash.

1017. Is not there some rule now?—There is a rule, but they do not attend to it.

1018. Have not the Commissioners authority to make them?—I should think they have; but then we cannot fight the battle, they ought to do it; that is how we have been served, last summer especially; if they used the water for grinding, it is impossible to get it at high-water mark.

1019. What new laws would you suggest with regard to the millers and old lock owners?—I should bind them to the old laws; that is to say, compel them on a particular day to pen for this flash, because, if they put on a lot more work on the mill, and we go and buy this water, if they use it we cannot get it to the high-water mark, and they will not draw; there is one particular mill at Sandford where we have had no end of trouble. Mr. Norris's mill, I think it is, and his own mill too below.

1020. You want some power to compel the millers at particular times to shut the water down, and to make flashes?—To pen for the flashes, in accordance with the old bye-laws that now exist.

1021. Colonel *Knox.*] Would it not improve the navigation of the river if there was a proper system of dredging carried out, so as to remove the sand banks and shallows which exist at present?—Yes, of course that would be the prime thing to do; to remove the hills, as we call them.

1022. Are you aware whether of late years there has been any attention paid to that subject?—None at all.

1023. No money has been paid for that object?—None at all.

1024. Mr.

1024. Mr. *Dawson Damer.*] Does that come directly under the Navigation Commissioners?—I do not know what it comes under.

1025. *Chairman.*] I suppose you consider that the water is a good deal wasted now, from the insufficiency of the works?—Yes; the locks are not right.

1026. In the summer time the water travels down faster than the boats, and it is not left for them, and so they are detained?—Yes; the water going faster than the boats, it gets to these mills before the boats get there, and they use it instead of penning.

1027. The boats then have paid for the water that they do not get?—That is it. We are obliged to fetch this water above Oxford, and we pay for it; it ought to be caried from pound to pound, and drawn at a particular time; and these mills ought to be closed. It is said in the Act that they are to pen for a flash, and instead of penning, they grind.

1028. They use the water, and then when the boats arrive they find the water gone before them?—Yes.

1029. Mr. *Neate.*] (To Mr. *Thomas Hedges Graham.*) Who receives the money for these flashes?—I believe the people in the upper part of the river, the weir owners; but it is a system that we do not recognise at all.

1030. It is not carried to account in the accounts of the Thames Commissioners?—No, certainly not.

1031. Do you believe it to be an illegal exaction?—Yes, certainly; they are bound up there to run their flash on fixed days without any payment.

1032. It is not your toll-keepers then that do that; they have nothing to do with it?—No; we have no toll-keepers on that part.

Witness.] We send a man forward from Oxford, and the boats are all waiting ready to go down, and then they share the cost between the boats.

1033. *Chairman.*] (To the *Witness.*) Then that all goes for nothing, because the water travels faster than the boat?—It is when it is particularly low that these millers do that; of course they do not care when there is plenty of water; last summer, for instance, that was done.

1034. As to the charges of the old lockowners, what do you say to them?—I think they are a great deal too high.

1035. What do they do for the money?—That is what I want to know; they do nothing at all.

1036. We have heard of some liabilities?—They do that for their own benefit.

1037. Mr. *Dawson Damer.*] It goes into their own pocket, and remains there?—Yes; they send a man to take the money; that is all they do.

1038. *Chairman.*] The cost of collection is their only charge?—That is all.

1039. Colonel *Knox.*] Is it within your knowledge that some of these old lockowners have certain weirs and things to keep up out of that money?—They keep them up for their own benefit; they keep up a weir to divert the water here, say (*describing it to the Committee*) for the mill; they do that for their own benefit; if they do not keep the water up it will go the other way.

1040. Mr. *Dawson Damer.*] There are some lockowners that are not millowners, are there not?—I do not know any lockowner that is not a millowner.

1041. There are some at Marlow, are there not?—I do not know the river so far down as Marlow; there are no lockowners our way that are not also millowners.

1042. *Chairman.*] Do you work horses?—Yes, on to the boats.

1043. What is your opinion of the application of steam power to the navigation?—I cannot quite see it, because we must have horses for certain points. The thing is what you can do with them afterwards. You must leave them behind if we take steam on at Oxford.

1044. Mr. *Dawson Damer.*] What is your lowest point on the river that you work down to?—I work as far as Goring.

1045. Mr. *Neate.*] Where do you begin?—I begin at Oxford.

1046. And go from Oxford to Goring?—Yes, occasionally lower; we go to Reading.

1047. Is there any great coal depôt at Goring?—There are superphosphate works there.

1048. *Chairman.*] Do you think that there would be a trade between London and Reading if the navigation were restored?—Yes; I am sure loads of things might come cheaper. Artificial manure would come cheaper; in fact, anything we can take out of the Pool; it saves the carriage.

1049. Do you think that there would be any carriage of corn and flour on the navigation?—Flour, I think, would go; it does go from Reading now, I think.

1050. With reference to this competition with the railway, you speak confidently upon that point, do you?—Yes; I think the railway people would cut the toll down immediately. I heard of it just now from one who is going to give evidence here, I think. He said that there were some deals from London brought to Reading, and that his man was running backwards and forwards to ask questions about it, and he lost a train or two in consequence. That is what they do in a general way. Directly they find that the water has got hold of any particular trade, they will cut it down directly.

1051. Where is it that you reside?—At Benson.

1052. Supposing that you had had nothing but railway communication to rely on for coal this last winter, what would have been your position?—I do not believe that I could have got the supply.

1053. Why not?—Because at that particular time the railway people cannot carry the supply; you cannot depend upon getting it by railway in the winter.

1054. Any great addition, you think, to the ordinary traffic they cannot carry on?—They cannot at that time.

1055. Mr. *Neate.*] How far are you from a railway station at Benson?—We are five miles from the Wallingford-road Station.

1056. Is that the nearest station to you?—Yes.

1057. Is there a great coal depôt there?—Yes; Mr. Hilliard has a depôt there.

1058. *Chairman.*] Is there much timber brought to Benson Wharf?—A great deal occasionally.

1059. That is brought by canal, is it?—By the river.

1060. What sort of timber is that?—Navy timber; large oak.

1061. Where does it come from?—From the neighbourhood

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neighbourhood of Brightwell Park; a large quantity was cut down there lately.

1062. Mr. *Neate.*] There is a great deal of timber along the banks of the Thames about Oxford, is there not?—Yes, a great deal.

1063. *Chairman.*] You have mentioned, I think, artificial manure, and I understand you to say, that you think you could get a trade in artificial manure at Benson, if you could rely on the river?—I could bring a good deal if I liked; I could have done so this year from the Victoria Docks.

1064. Why do you not bring it now?—Because you cannot rely on the water.

1065. If you could rely on the water, you would do a considerable trade you think in artificial manure at Benson?—I could do a couple of hundred tons a-year; I was asked to do that from the Victoria Docks.

1066. It would come cheaper, would it, by water?—They charge more by rail.

1067. Mr. *Neate.*] Why does the rail charge more?—I am sure I do not know.

1068. It is because it is lighter, I suppose, and takes more room than other articles?—I do not know whether that is the reason.

1069. *Chairman*] Taking the question of time, how would it be in bringing coals, for instance, to Benson from the Moira Colliery by the river or by the rail?—I would back my boats to bring them as quick as the rail; they would bring them quicker in fact.

1070. Why should they do so?—I cannot tell you; but I know that I may have the invoice of certain trucks of coal, and perhaps one truck will come at one time, and another will come at another time, and you will find one pushed back here, and another pushed back at another station.

1071. I suppose, if the Railway Company knew that the intention was to test the question of time, then they would come quick enough?—Yes, that they would; by express.

1072. But, taking the chance of the ordinary way of doing things, are you of opinion that the coals would come as quick by water as by rail?—I am quite of that opinion; I have experienced that lots of times.

1073. Mr. *Dawson Damer.*] Have they sidings enough on the railway, do you suppose?—I do not know; but they take the trucks off, and put them on one side if they get too many, and one truck will be left here and another there; you cannot get any quantity of trucks together.

1074. *Chairman.*] What is the meaning of the expression, "dead slack," in regard to coal?—It means coal which is quite dust.

1075. Is there much of that dead slack when the coal is brought by rail?—Yes; a great deal.

1076. Supposing that all your coal had been brought by rail instead of by water, how much of it would have become slack?—Tons and tons; we should have been obliged to screen it.

Mr. Samuel Ashley, called in; and Examined.

Mr. *S. Ashley.*

1077. *Chairman.*] What is your business?—I am a Coal Merchant at Pangbourne.

1078. Have you worked boats upon the river?—Yes.

1079. What do you carry in those boats?—Some of them carry coals; coals, and deals, and timber.

1080. From where?—From London up to Pangbourne.

1081. You are general carriers, in fact, are you?—Yes, of timber and coals.

1082. The coals, I suppose, that you bring from London are the sea coals?—Yes.

1083. Do you ever carry any groceries or light goods?—No.

1084. Do you carry flints?—Yes, we take flints from Oxford to Pangbourne.

1085. What have you to say about the works on the Thames?—It is the old locks that are the worst things.

1086. In what way do you mean?—The charges on them I refer to.

1087. As to the condition of the pound locks and the works, what is your opinion?—There are a good many of them in very bad repair.

1088. But the thing most complained of is the heavy toll, is it, which is paid to the old locks?—Yes.

1089. What is done for that money?—I cannot tell what is done for it; I cannot see anything done.

1090. Carriers get no benefit, then, for that money?—Nothing at all; at least we have not got any.

1091. How long does it take you to go with a barge from Pangbourne to London?—It generally gets in about the third morning, but it is according to how the tide is away from Teddington.

1092. But in the summer, this time of the year for instance, how long does it take?—About the third morning, I think, it reaches.

1093. At other times of the year, how long does it take?—We can generally get in in three days, if we are not hindered anywhere.

1094 Your principal complaint is the charge of the old locks, you say?—Yes.

1095. Do you think if that charge were reduced or abolished, the traffic would increase?—We might take things a little cheaper and get a little more, I think.

1096. You would be better able in that case to compete with the railway?—Yes, I think we should.

1097. What do you think you would then carry that you do not carry now?—We might carry flour from the mills, perhaps.

1098. What else?—We might take a little wheat up.

1099. Have you had to complain of the use that is made of the water by millowners?—Yes, I have had to complain a great many times.

1100. What has occurred to you in that respect?—They will not draw water for you when you get down to them to get you along.

1101. Can you give us any instances where you have been put to much inconvenience and have been delayed by that?—I have experienced that at Clee and Caversham; at Caversham mostly.

1102. Have you had anything to do with steam on the water?—My boats used to be towed up up and down by a steamboat, about seven years ago; the steamboats used to go from London to Maidenhead; it was only our single canal boats.

1103. Do you think that your canal trade to the places on the banks of the Thames would be very

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very much increased if the charges were reduced?—I think so.

1104. Colonel *Knox.*] Do I rightly understand you that you had a steamer from London to Maidenhead once?—She used to tow us up and down.

1105. How long did she take to go up?—It was according to what she had behind her in going through the locks; sometimes she used to take four or five barges, and our canal boat behind.

1106. With four or five barges what was the length of time taken?—About a day and a half. If she were going to-day she might go up to Sunbury, perhaps, and it would take her all the next day to go from Sunbury to Maidenhead.

1107. Would that be 24 hours?—It would be 12 hours' work from Sunbury to Maidenhead.

1108. From Staines, for instance, up to Oxford, how long do you think a steam-tug would take to tow three or four barges, or whatever the usual number may be; would they go up in 50 hours?—I suppose they would, but it is according to what hindrance they have at the locks.

1109. You think that they would work up in 50 hours?—Yes.

1110. And from Oxford to Staines they would come down, of course, considerably quicker?—Yes, of course; if they had water enough.

1111. On the supposition that the river was in good order there, they would come down in about 17 or 18 hours?—Yes; but those steamboats are beaten when they get too near the ground, and on the waterside.

1112. Mr. *Dawson Damer.*] How often have your barges been stopped on their way down, on an average in the year, by want of water?—We can only get away from Oxford twice a week, regularly.

Mr. James Honey, called in; and Examined.

Mr. *J. Honey.*

1113. *Chairman.*] What is your business?—I am the manager for a barge-master at Reading, Mr. Richard Thatcher. I superintend for him.

1114. He is a barge-owner, and you are his manager, is that so?—Yes.

1115. How many years have you been concerned in managing for barge-owners?—Since the year 1819.

1116. What is the principal trade carried on in the barges?—Timber and deals principally, and flour also.

1117. Any coals?—Not many coals now; they cannot keep up by the side of the rail in price; we have offers for large quantities, provided we could do them.

1118. Why cannot you do them?—Because, taking the present prices that they are paying by the railway, it would not pay us to bring them up with the present rate of tolls on the river.

1119. The tolls are too high, now, are they?—Yes.

1120. If those tolls were reduced, do you think that you could carry a large trade in coals?—Yes; we used to bring the gas coals in old times, but we were obliged to give them up after the railways came.

1121. When you speak of the coal trade, where is that from?—From London to Reading; that is to say, the north coal; the sea-borne coal.

1122. Is it the high tolls on the upper navigation of the Thames that prevent you from doing more in that trade; if the tolls in the upper district were as low as the tolls below Staines, could you compete with the railway?—Then we could get the trade, I have no doubt.

1123. Have you tried steam?—Yes, I belonged to a steam company once, the "Commercial, Inland, and Steam Carrying Company," it was called; the late Messrs. Parker and Foster turned their business over to them. I was on the Thames daily for 15 years; in fact, I had a horse kept, as the manager, for going up and down the Thames to expedite the business. This late Act of Parliament in reference to the carriage of the deals has caused a great falling-off on the navigation. We carry 50 cubic feet to the load, at least those have been our terms, and now they have got it to 65 feet by rail, and that is called a ton, and they are getting the loading from the river in consequence of that.

1124. Have you had freights offered you of corn and artifical manure?—Yes, we bring up manure now; we brought up 100 tons lately, and we brought many other things at the time that the tolls were being taken off. I made engagements for a great deal of loading then. My business is to secure the loading. I have to look out at the Custom House for it.

1125. Have you had any freights of corn and manure that you could not carry, on account of the tolls on the navigation being so much higher than the railway charges?—We get the manure even now; we carried up 100 tons within this last fortnight, because we have lowered 1 *s.* a ton, so as not to let them go by rail, because we are expecting that something will be done.

1126. You would carry it at a loss, in fact, rather than part with it at present?—That is the very thing we have done; we are expecting that something may be done that will enable us to keep the trade, therefore we have made sacrifices upon it.

1127. Do you feel pretty confident that you could get a good trade if the works on the navigation were put into a good state and the tolls lowered?—Yes, not a doubt of it.

1128. Supposing that nothing is done, and that the works are allowed to fall into decay, what then?—Then the trade will very soon be knocked off, because they will no be able to carry it; the rail must get it then, and the river will be left altogether. The works are getting into a very sad state. I may say about this Petersburg standage, that I refused 100 tons for the sake of 1 *s.* a ton; that fact would show that if the tolls were lowered we could command some trade.

1129. Perhaps the use of steam might help you, might it not?—We had a steamer, and I know a little about steam; I superintended the steamer for between two and three years up and down the river, and I had a little work here; soon after that it was given up.

1130. Mr. *Bathurst.*] In what year was the steamer given up?—Those that I worked with have been given up 20 years; we had three; we had steamboats to take the cargoes up, and steam-tugs also.

1131. They were paddle-boats, were they?—Yes.

1132. Paddle-boats are much more expensive to work, are they not, than others?—Yes; but as to the cheapest mode of getting along, that depends on whether you get steam or horses.

Martis, 16° *die Maii* 1865.

MEMBERS PRESENT:

Mr. Baring.	Sir Francis Goldsmid
Mr. Bathurst.	Mr. Hankey.
Mr. Dawson Damer.	Colonel Knox.
Mr. Henry Fenwick.	Mr. Neate.
Mr. Milner Gibson.	Sir Frederic Smith.

THE RIGHT HON. THOMAS MILNER GIBSON, IN THE CHAIR.

The Rev. JAMES CHARLES CLUTTERBUCK, called in; and Examined.

Rev. *J. C. Clutterbuck.*

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1133. *Chairman.*] WHERE do you reside?—At Long Wittenham, near Abingdon.

1134. Are you acquainted with the River Thames above and below Oxford?—Yes, I am.

1135. From long residence in the neighbourhood?—From the time I went to Oxford to the present time, which is 45 years, more or less.

1136. Have you had opportunities, then, of observing the condition of the river from time to time?—Almost daily, when I have been there.

1137. What have you to state to the Committee on that subject?—I shall be happy to answer any question which the Committee may wish to put to me. I can speak of the Thames above Oxford, and of its sources, and I can speak also of the Thames below Oxford.

1138. Will you give us some information about the sources of the Thames above Oxford?—The sources of the Thames above Oxford are, as everybody knows, in the Gloucestershire Hills, more or less, and also issue from the chalk by which the valley of the Thames is flanked to the south, and the water is brought down on what is commonly called the Oxford clay. The Oxford clay is the carrier of the water. The upper part of the Thames is in a very dilapidated state with regard to the navigation; indeed, I believe that it is scarcely used at all. I am not sure that it can be used from Oxford to Lechlade for the entire course. With regard to those locks that I have seen, I question very much whether a barge could pass through them at all. The gates are in a very dilapidated state, and the navigation is almost entirely at an end. My opinion is, that it might be maintained, if necessary; but the traffic on that part of the river is so small, that I question whether it is worth while for the Commissioners—that is to say, those who have the care of the navigation—to expend any money on it at all. I think that it might be retained by a different adjustment of the drainage of the valley. Mr. Bryan Wood, of Chippenham, has been employed extensively up that valley, and he has made a canal of the river, separating the land drainage and the surface water, and the soakage of the meadows, entirely from the river; he has cut off all communication with the river, and has brought down the drainage of each limb, as it were, of the valley into a lower level; thereby securing the drainage, especially on what I think is the Throckmorton property, the property belonging to Oriel College and others, and thereby he has improved the grass land on the meadow banks, and entirely separated the river from the land drainage. That I conceive to be the plan which must be adopted throughout the Thames Valley, if you intend to drain it effectually. I believe that the navigation then might be more easily maintained, because you would entirely do away with the small bridges which pass over the transverse severance ditches, and then you would only have to maintain the towing path and those bridges which pass over the affluents of the stream. I do not pretend to say that it is necessary to keep it up, but I believe it might be so kept up. I think that one of the great evils on that part of the river is the fact that it is the custom of the persons who own or rent the weirs, to draw water when it is wanted below at the instance of the bargemen. The bargemen send up particularly to a weir called Skinner's Weir, and I believe some others, and they pay so much money for the drawing of the water; that water comes down in a lump, and passes very often unfairly by Wolvercot Mill, which is a very important paper-mill upon the stream where the paper for the University Press is to a certain extent made; there is a weir called King's Weir through which the waters flow. Now it appears to me that if there is any new arrangement of the Commission of the Thames, there should be a very decided power given to some person or body of persons who should be enabled to regulate the water and never allow any whatever to be drawn except under proper regulations, because that drawing of the water induces a great irregularity, which is injurious, first to the mills and also to the navigation. These men, when once they have got their water, are very often very careless as to the way in which it is disposed of. That applies to the state of things above Oxford. If the Committee wish to know about the supply of water, and whether it is likely to fall off in the upper district, I may state, from my own knowledge and what I have seen, that there is a danger of the water in the Upper Thames falling off. The peculiar geological condition of that country is this,—you find the Oölites there, and there is an interspersing of the beds of stone and rock and gravel with clays. Wherever there is a junction there is a spring, and wherever there is this weeping the springs there are necessarily land drainage; the land drainage leads away this water

water at once, so that these parts of the strata are left entirely dry, and instead of weeping out gradually, as they used to do before the land drainage was in vogue, and so supplying the water to the Thames throughout the summer, it all comes away at once. I have myself seen at Cirencester the river running bank high, perfectly clear—as clear as crystal, merely from the drainage water which comes off in such an immense quantity; whereas in the same place where the water was four or five feet deep, running in an immense volume, as at the Thames head and elsewhere, you will find at the end of the summer the river perfectly dry. I should say that it is a very important question, not only with reference to the Thames navigation, but also with reference to the water-supply of London. I believe that the time will come, and that we may live to see it, when London will be distressed for want of a supply of water from the Thames. I believe that it is an important question to the London water companies, and I think that the time will come when it will be absolutely necessary to construct reservoirs in the upper part of the the Thames just in the same way as reservoirs are constructed to supply the Oxford Canal. The Oxford Canal is so well supplied with water from these reservoirs that occasionally they are able to sell water to the Grand Junction Canal. The upper part of the Thames is extremely well fitted for these reservoirs, and I believe that the time will come, and that not long hence, when these reservoirs will be absolutely necessary, whether for the mills, the navigation, or the supply of water to London.

1139. Your general view is, that efficient measures should be taken to economise the water and to prevent its waste?—In every way. From my love of the question of water, I have been led to examine it very closely at the instance, first of all, of the late Dean of Westminster, Dr. Buckland; and I have turned my attention to the subject, and I have always in every case, when asked my advice, said, "Be sure that you economise the water, for there are many towns in England now growing which appear to me to have ruin staring them in the face for want of a proper supply of water." That may seem an exaggerated statement; I believe, however, that it is strictly true; certainly it is with reference to the Valley of the Thames, and there is no place that I could put my finger upon where you could have the storage of water more effectually carried out than you could in the upper part of the Thames Valley. With reference to the use of the water, the water must be placed under a very strict control. I have an idea that no flashes should be allowed. If the navigation is not continued above Oxford, the drawing of water for flashes should be entirely discontinued, and the water should be under the strictest possible regulations; and I think that when it is necessary, if it be necessary, to draw for flashes, it should be done at King's Weir under the direction of persons competent to carry it out. I believe that Port Meadow, above Oxford, might be made a very good reservoir for water. I believe that if the river was dredged, and proper steps were taken with reference to the weirs, a large quantity of water might be impounded there without at all affecting the sanitary state of Oxford, provided only that that system of draining was carried out which I believe to be the only effective means, namely, the system of draining the edge of the valley and making the river below the outfall for the various drains. I think that there may be, perhaps, jealousy on the part of the landowners; they may not like the expense, but it is necessary, I am sure; and I believe, with reference to the reservoirs, that the water companies would have no objection to deal with the question in a most liberal manner.

1140. Can you form any opinion as to what would be the consequence of allowing the navigation to fall into disuse altogether?—I do not think that anybody can tell what the consequence would be. There is a weir below where I live, and I have watched the drawing of the water in a flood time, and having taken the velocity, and to a certain extent gauged the water, I think that the drawing of the weir doubles the velocity of the water; the velocity that I have reckoned would be something like 45 yards in a minute, when the tackle, as they call it, is shut in below; but when the tackle is removed, in flood time, it is something like 80 yards in a minute. There is a place near us where the stream impinges on the bank; it is a bank of gravel, capping a face or bed of clay, and in the flood time in winter, the water impinges on that bank with great force, and it gradually falls away. Since I have occupied a field, that is to say in about 12 years, there has been a growing-up of nearly half an acre of ground on one side, and the loss of about half an acre on the other. There are places there which I could point out where large portions of land have been entirely swept away, and where the whole course of the river has been changed; and I know that a place which, when I first came to Long Wittenham, was a solid field, is now 18 feet below high-water mark, owing to the excavations made by the water.

1141. Mr. *Hankey.*] You do not mean 18 feet in depth, do you?—In depth; and there are great lumps of clay that I have seen, which have been rolled out as big as your head; that is a fact, and I could prove it. I do not wonder that the fact is scarcely believed. I could have brought a plan with the measurement, and I could show you by plumbing the stream, that what I say is perfectly true. Therefore, judging by this, I conceive that there might be very great injury if you were to allow the quickening of the stream, which would be the necessary consequence of removing the weirs.

1142. Sir *Francis Goldsmid.*] Does this washing away of the ground take place in the spring?—When there is a flood; everybody knows the Thames Valley is flooded sometimes; immense quantities of water come down; from that I should say if the stream were to be allowed to take its own course, great injury would result; I cannot say what, but it might very likely wash away a house that I occupy.

1143. *Chairman.*] Have you thought at all of the principal causes of the present ruinous state of the navigation?—We look to the first cause as being the railroads, which have taken up the traffic; we suppose that to be the general reason. But then comes the question of competition; it is impossible for the navigation to compete with the railroads when there are a number of old locks at the side of the other locks, which make vessels pay nearly the same toll as the navigation does. I think that there is something like a pound paid, between Oxford and Reading, on a boat merely for those old locks, through which the boats never go; they may do some service, but

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but I am not aware what service they perform to the navigation; that is one of the great evils. Then the other evil is in respect of the regulation of the water. If you had the water properly regulated from above, I believe that you could secure a much more regular navigation than you have at present. We often have boats lying above us when we are wanting coal in the summer, and we and others cannot get any for weeks and weeks together, from the navigation being stopped.

1144. That stoppage arises from the want of a proper regulation of the water, does it not?—It appears so to me; there is always an antagonism between the mills and the navigation, and there always will be. The millers complain of the boatmen, and the boatmen complain of the millers.

1145. Then there is the fishing, is there not, also causing difficulties?—That is a dreadful thing; I would never allow any fishing, except by angling. I would put an end to all fishing by bucks at the weirs.

1146. Mr. *Dawson Damer.*] Is there much fishing by nets?—There is some, but not much; it is a navigable stream, and everybody has a right to fish from a boat, and there is very little hindrance. I do not think that people net the the stream much, but they fish by bucks at weirs. I have got up in the morning and found the river quite low for the reason, that some one below me has run the water all night for eels; then at other times the land is flooded.

1147. I suppose that the worth of these eels when caught, would not be more than half-a-crown?—It is a mere trifle; it is not worth consideration.

1148. *Chairman.*] You would prevent, as I understand you, this arbitrary drawing of the water for mills and fishing, and other purposes, by the establishment of some local control?—Decidedly; I think that the control must be local, otherwise it would not be effectual; it must be local and very strong. I do not pretend to say who should be the Board, but it should be composed of some people who would make it their business. I have the honour of being a Thames Commissioner, but I do not hold the honour in much estimation; I think that it is a farce at present. I do not speak against the honoured Chairman and the Board who manage it, but I certainly think that the arrangement that every clergyman who lives on the bank of the river, and every man who has so much money, should be able to qualify as a Thames Commissioner is perfectly ridiculous.

1149. Have you ever been a member of the committee of the Commissioners?—Never; I have not been voted into it.

1150. You are a Commissioner, however?—Yes.

1151. You have not transacted any business, have you?—I have gone down to vote for a clerk or a lockman; we have pressing letters to go down and vote for a lockman sometimes. I am sure that what I have done as a Commissioner has never been of any use.

1152. Are you of opinion, generally, that the situation altogether is one of a serious character, and one that ought to be dealt with?—I think so, most decidedly. I have mentioned the supply of water to the mills, and the navigation; that is local, we may say; but I think that the question of the water-supply to London is a wider question. I think, first of all, that no diversion of the stream or waters should under any circumstances be permitted, and that there should be a very strong control over the waters as they are now; for if, at some future time, you should allow any of the water to be tampered with, I think it will be a very serious matter indeed. I will give you an idea of what a pump can do. In the Upper Thames there is a place called the Thames Head, from whence the water used to flow, I have no doubt, in abundance. From the peculiar physical position of the valley, the water used to flow out in a peculiar way. Subterranean water generally lies on an incline, and whenever there is a dip in this line,—that is to say, when the country dips below the angle at which the water rises in the soil—there will be a spring, and that is no doubt the origin of what is called the Thames Head, which lies close by the Tetbury Road Station. There is a pump, and that pump is working in a cylinder of 9 feet stroke, and 33 inches diameter, which, without exaggeration, raises at every stroke 250 gallons of water, and there are eight strokes a minute, that is about three million gallons a day. Now there was a scheme for supplying Cheltenham, and they were to take about a million and a half of gallons, that would be just half as much as this engine pumps up. I went down the bed of that stream, and I found that there was not a drop of water till you got down to a place called Ewen, and then you begin to find the springs. Then I went to the first mill on the stream, and found the disconsolate miller scratching his head, and not quite clear whether within two or three days he could grind one sack of corn for a man who had bought it. In the next mill there was an agricultural engine to help them to grind, as there was not sufficient water to grind with. The miller told me that they would be up to their ancles in water one day, and the steam pump should be put on, and in two days they would be able to walk across to the opposite meadow without getting wet. Now, if the Cheltenham Waterworks had taken those springs at South Cerney, they would have done just the same thing by the Churn as that engine does for the original Thames, for that was the original Thames in the time of the Saxons, and no doubt there was a beautiful stream of water gushing out in one head which made it notorious. If Parliament had allowed that scheme of Cheltenham to be carried out, then they would have played the same trick with the Churn as they had done with the Thames, and then somebody else would come and they would take another stream.

1153. Mr. *Neate.*] What do they do with that water?—They pump it into the canal; the summit level of the Thames and Severn Canal is supplied by it: instead of having a reservoir, they have this pump, and one half goes to Stroud, and the other half goes into the Thames, so that there is only a loss of a million and a half gallons a day, but that would be about what they wanted for Cheltenham.

1154. This is the head point of the canal that you are speaking of; the canal falls both ways?—Yes; there are three millions of gallons; one half goes one way, and the other half the other way.

1155. Where does the part that comes back into the Thames come in?—It comes in at Lechlade, by the lock; it comes by the South Cerney spring; it comes from the same source, I believe, from the Great Oölite.

1156. *Chairman.*]

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1156. *Chairman.*] Can you tell us whether you have thought of any mode of getting out of the financial difficulties of the navigation? — I suppose people generally do it by borrowing.

1157. Then you must have some security to offer before people will lend, must you not?— I do not know that I should like to enter into the matter myself, but I should think, seeing the very great importance of this question (I do not believe I have given it too great importance), that it behoves the Government of this country to see that the Thames is not misused, and that, if possible, the navigation be kept up. I think it is useful, if it is only to keep the river in a proper state, because if you let the river down it will waste.

1158. Do you consider that the keeping up of the navigation is almost necessary for the keeping up of the supply of water to the metropolis, and also for sanitary purposes?—I think so. I will give the Committee a reason why, in one part of the Thames, I think that may be very well proved. It is true that the bed of the Thames above is a clay bed; but still, if you stank water back, you know that it cannot flow away so quickly; somehow or other you will keep the water in its place better than you would if you let it go on its own way; but when you come to Dorchester, the Thame comes in there, and the main river is generally called the Isis: I believe it ought to be called the Thames all the way, and the other the Thame stream. The bed of the river there is on the upper green-sand stratum, which is very like the chalk; lower down it runs over the chalk, through both of which the water issues into the bed of the river. From that point down to Windsor the river is fed by the springs that issue into it, and hence I believe the reason (if there be a reason) why it is said that there is no ground-ice below the Thame stream; the springs issue into the bed of it, and prevent the ground-ice forming; but if you were to lower the river, say in that reach, about Pangbourne, by destroying the Pangbourne Lock; then, if you were to measure the wells on the side of the river, and were to cut the weir-head to-day, before to-morrow every well in the country would have fallen for a mile inland, at least; that I can undertake to say. You would have a freer discharge of the chalk water which now is penned back, and comes out gradually. That is a thing that might not strike everybody, but I am quite sure it is so, and I am sure that any waste of the Thames water is a thing very much indeed to be deprecated.

1159. Mr. *Neate.*] I believe you are a Member of the College of Civil Engineers? — I am not a member, but I have read papers there; they have accepted papers of mine there.

1160. Will you permit me to ask you the explanation of something you are alleged to have said there, which I find at page 36 of this book in my hand, as part of a speech of yours. "Mr. Treacher, the late Surveyor of the Thames, had informed him" (that is you) "that, in 1855, the perennial flow in the Thames was so much reduced, owing to the rainfall in the previous 18 months only amounting to the yearly average, that all the flood-gates at the Pangbourne Lock were opened at one time, a fact without example in his long experience." Now the question I have to ask you is this, Why was the reduction of the amount of water in the Thames a reason for opening all the flood-gates?—It was only meant that they could do it; that they were able to do it. Mr. Treacher told it me as I have told it in that statement. I cannot explain it further than saying that here is the fact; he told it me as an unexampled fact, and a fact showing that the volume of the water was so small that the pressure was nil.

1161. Perhaps he might mean that they could do it without incurring the danger of flooding the lands below?—I do not know whether that was the meaning. With reference to the shortness of water, there is a note at page 10. Mr. Stacey, who is a very intelligent person, and who manages the Wolvercot Mill, has taken frequent gauges of the river, and he gave me, as the minimum, 8,000 cubic feet per minute as passing by their mill, and so much more at the Wytham Mill as made up 11,000 feet, and the total minimum this year was 6,000 instead of 11,000.

1162. Did I rightly understand you that actual experiments had been made within your knowledge of the effect of lowering the level of the Thames upon the wells in the neighbourhood?— By Mr. Slatter, a friend of mine, a man who has the same sort of turn as I have for looking into these things. I told him to watch the wells at Streatley, and he watched them when the water was so lowered, and found the water in the wells lowered also.

1163, It is only the wells at Streatley that you speak of?—Yes; the bed of the Thames is in the chalk there covered with gravel, but still virtually in the chalk; if you were to draw down the Thames at Streatley, you would find springs issuing in the bottom of the river.

1164. The water does not go through the chalk, does it, but the Thames rests upon a bed of chalk?—It rests upon a bed of chalk, and receives the drainage of the chalk, and, to a certain extent, the drainage feeds the river.

1165. The water does not go through the chalk, does it?—Almost all the water supplied to London comes from the chalk, and that was the first thing that brought me forward in this matter.

1166. It does not go through the chalk, however?—It does not go through the chalk because there is something under it, but it accumulates in the chalk, and there is a level which I call the chalk water-level; they have lowered the level of the chalk under London 60 feet.

Mr. William Blandy, called in; and Examined.

Mr. *W. Blandy.*

1167. *Chairman.*] Where do you reside?— In the neighbourhood of Reading, about three miles out of the town, but my place of business is in the town.

1168. You are a banker, are you not?—Yes.

1169. Are you a bondholder in the Thames Navigation? — Yes, in conjunction with my partners in the bank, not individually; we are bondholders to about 1,600*l.*

1170. Do you represent any other bondholders? —We represent the executors of the late Mr. Robert Harris, who was one of our predecessors in the bank, and Mr. Richard Sherwood, who is the brother-in-law of my senior partner, and Mrs. Stevens, the widow of the brother of my senior partner, who was also in the bank.

1171. Sir *Francis Goldsmid.*] What is the total amount of that?—Somewhere about 5,000*l.*

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1172. *Chairman.*] In addition to your 1,600*l.*, do you mean?—Very nearly that in addition to the 1,600*l.* Mr. Sherwood's is 2,000*l.*, I think, and Mr. Harris's 1,700*l.*, and Mrs. Stevens' is near about the same, so that it is very nearly 5,000*l.* in addition to the 1,600*l.*

1173. Do you receive interest?—We have not received any interest for the last two years, and it had been very considerably reduced previous to that; it had gone down to 10*s.* per cent. instead of 5*l.* per cent.; it had been gradually reducing as the funds fell off.

1174. Do you know whether the bondholders have made any proposal to put the financial affairs of the navigation upon a better footing?—They have not had any means of making any proposal; I have not the least doubt that the great majority of them would be very willing to accept a very small per-centage upon their bonds; I am not aware that there is any way in which they could make a proposal of that kind.

1175. Has there been any proposal made to postpone their bonds to any new loan that might be raised?—That has been proposed; there was a question whether they were willing so to do, and my opinion is that the majority would postpone them; certainly as far as we are concerned and those that we represent, we should be very willing to postpone them to any parties willing to make a loan for putting the navigation into a thorough state of working order.

1176. You say that you think that the other bondholders would be willing to postpone their claim until after the interest had been paid upon a new loan. Has any amount been named for that new loan?—From 20,000*l.* to 30,000*l.*

1177. Provided the new loan did not exceed that amount they would consent to postpone?—Provided it did not exceed that, I have no doubt that those whom we represent would be perfectly willing to postpone their claims.

1178. Have any of the bondhholders proposed to take any steps to recover their interest?—There was a meeting of bondholders in Reading, but I was not present at it; I have had a conversation with one or two of them since, and they have talked about taking possession of the tolls and tollhouses, but I said, "You will find that you will get the worst of it if you do; you cannot stop the navigation; there are other interests to be considered besides the bondholders; there are the old lockowners and the millowners." I said that if they took possession of a toll-house they must maintain a toll-keeper there to look after the lock, and consequently that upon them would fall the onus of paying the salary to the toll-keeper, and of course whatever money they got they could only distribute *pro ratâ*, they could not put it into their own pockets; besides which, I apprehend that it would be the duty of the Thames Committee to apply to the Court of Chancery for an injunction to restrain them from taking possession of it; it is their duty to maintain the navigation as long as they can.

1179. What do you attribute the depressed state of the navigation to?—In a great measure to the railways, that is to say, the competition with the railways, and also to the expenses upon the river. The old lock dues are a very heavy burden upon the navigation, and they prevent us from making any arrangement for lowering the tolls so as to compete with the railways. I should say that the Commissioners and the Committee acting for them have endeavoured to meet the state of things. Under the Act of Parliament there is a Committee of three in each of the five districts appointed annually by the Commissioners at large, and they are to a certain extent the executive; they can only recommend to the Commissioners at their general meetings; the general meetings confim the recommendations of the Committees. We, from time to time, endeavoured to meet the state of things; we purchased two of the old locks ourselves, which, of course, we threw open; we opened two of our own ordinary locks, one below, and one above Reading; but we were hampered always in our endeavour to lower the tolls, because we could not get the old lockowners to meet us as a body; a few of them were willing to reduce their tolls as we did, but as a body they would not do it, and therefore we were not able, in that respect, to compete with the railway.

1180. Do you think that if the tolls were reduced to a certain extent, the navigation would compete with the railway?—It would to a great extent; there are some things in which it will not.

1181. You think it would be self-supporting, do you, if the tolls were reduced?—I think it would, particularly if there should be an Act of Parliament giving additional powers, such as for the encouragement of steam navigation; there is one steamer now running from Reading to London, belonging to the Reading Iron Company, which on an ordinary fair day performs the voyage in one day.

1182. Sir *Frederic Smith.*] How long does it take to go back from London to Reading?—Well, it would take longer, because that, of course, is against the stream. I believe it takes about double the time.

1183. Sir *Francis Goldsmid.*] That steamer is one belonging to the Reading Iron Company, you say?—Belonging now to the Reading Iron Company.

1184. Mr. *Dawson Damer.*] Is there only one steamer?—Only one.

1185. Mr. *Hankey.*] How often does it go in a month?—They generally go once a week.

1186. Mr. *Bathurst.*] With goods?—With goods traffic entirely.

1187. Colonel *Knox.*] Do you imagine that with the application of steam for the traffic of the river, the distance from the Pool up to the upper part of the river at Oxford, could be done in 50 hours?—I am not sufficiently acquainted with the subject to be able to give a decided answer, but I should think that in the ordinary state of the weather it could, but our surveyor could answer that question better than I could. Some years ago there was an attempt on the part of some persons to establish boats on the river (I only mention this as a proof that the Thames Committee have not been altogether inattentive to the wants of the Thames); still there was the difficulty of the tolls; they could not get over that, and they were not people of any wealth, and therefore they could not maintain it; we gave them a bonus or two, to make the experiment.

1188. Sir *Francis Goldsmid.*] I think you said that you did not take part in the proceedings of the meeting of the bondholders lately held at Reading?—I did not take any part in that meeting.

1189. Have

1189. Have you any means of knowing what amount of bondholders were represented at that meeting?—I think at the meeting of the Commissioners they were represented to be about 8,000 *l.*

1190. You said that you were willing to postpone your interest to a loan of 20,000 *l.* or 30,000 *l.*; have you any means of knowing whether many bondholders concur in that view?—The general clerk probably could answer that question better than I can; the bondholders are scattered all over the country so widely, that I could not give a decided answer to that.

1191. I am informed that the bondholders present at that time were willing to take as little as 2 *s.* in the pound for their interest in the debt. Now, if you had the choice, would you prefer such a proposition as that, or postponing your bond to a loan of 20,000 *l.* or 30,000 *l.*?—I would rather take the 2 *s.* in the pound, certainly.

Mr. *W. Blandy.*

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1192. *Chairman.*] If nothing is done to the navigation, there is no probability of the bonds ever getting any interest at all, is there?—I think not.

1193. It will get worse, if possible?—It cannot be worse than it is at present, because we get no interest, and the bonds are not saleable now, as they were up to a very recent period.

1194. Sir *Francis Goldsmid.*] I think you said that you were the owner of one of these old locks?—No; that the Commissioners in former times, when their funds were amply sufficient, purchased two of the old locks, which they threw open for the benefit of the traffic.

JOHN THOMAS NORRIS, Esq., a Member of the House; Examined.

1195. *Chairman.*] YOU are Member for the town of Abingdon?—I am.

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1196. Are you the owner of any of what are called the old lock tolls on the Thames navigation?—I am the owner of the old lock tolls at Sandford, near Oxford.

1197. Is that above or below Oxford?—Below Oxford.

1198. Will you explain to the Committee the nature of these old lock tolls?—I believe that they originated in the circumstance that millowners were established from time immemorial upon the Thames until at times and in places there was a desire between one town and another to make a traffic by way of boats, in fact a navigation; and on their passing the mills the millowner made sacrifices by running his water, and putting up weirs and pound-locks to promote and facilitate the passage of boats, and so he established a customary right by the consent of persons using the navigation to charge a toll as they passed. I believe that the origin of it can scarcely be traced. One witness whom you have had here to-day, my friend the Rev. Mr. Clutterbuck, has mentioned in my hearing before now, that the Abbey of Abingdon before the Conquest levied tolls in so many dozens of herrings for every boat that passed as a compensation to the old lock owner for giving accommodation to the navigation. In process of time, the navigation became more and more important between the extreme points of the river as well as between the towns situated upon it, and Acts of Parliament were passed, calling into existence Commissioners to manage the navigation, and recognising the rights of the old lockowners to continue to receive their tolls in the same way as they did when they entirely managed the navigation themselves. The Commissioners from time to time improved the navigation at various points, and put up locks to accommodate and facilitate the traffic which superseded the use of the millowners' locks; they nevertheless obtained powers under their Act of Parliament to control and regulate the running of the water, so that between certain points where the water would be, in the summer season especially, short and insufficient for navigation purposes, what are called flashes, or flushes of water were established; and the millowner was called upon from time to time to render that service, under the power of the Act which called the Commissioners into existence. Under the authority of that Act they, being restricted to a certain extent, but not much restricted, regulate the periods when and the duration of the periods for which the water shall run to facilitate the traffic, and that is the service which the millowner renders now without the further services of providing the locks and weirs.

1199. He has no works to keep in repair for the navigation, has he?—He has no works to keep in repair except as regards the wear and tear of such of his own works as are in some measure damaged by the use of the running of the water for the navigation. He is bound, for instance, where the water is penned up to make a pool of water for barges to float along; he is bound, whether for his own convenience or not, to keep up the means of opening and shutting these weirs to let the flush waters pass along. I would illustrate that by saying that if at Sandford Mill my tenant now did not find paper-making an operation that he chose further to carry on, and said, "I shall not conduct this mill any longer; it does not answer my purpose; I shall cease to control the water and shut it up;" the powers of the Thames Commissioners over him would be such that he would be obliged to keep his shutting tackle in order, and obliged to keep the water up to a certain height on the days when barges were expected to pass, and obliged to find a man to run the water through the lock (he is called a lock-shutter), in the service of the navigation. Taking his mill to be of no use, he would have to render that service; and taking it to be of use, then it is a sacrifice to have to run the water away from the wheels which are to conduct his operations.

1200. Then in order to enable these new pound-locks to be available for the navigation, the millowner is obliged to sacrifice some use of the water for his work?—Precisely so.

1201. And the millowner is generally the old-lock toll owner, is he not?—Occasionally, where properties have been sold, they have been sold in two lots, and another party has become the owner of the old-lock tolls. Two instances were mentioned just now where the Commissioners themselves bought the old-lock tolls, so that people ceased to collect them, for the purposes of facilitating the navigation, but mostly the millowner is the owner of the old-lock tolls.

1202. But the old-lock toll is much more in amount than the value of the service which the millowner now renders to the navigation, is it not?—Possibly it may be, but it is an immemorial

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morial right, and the old lockowner cannot be made to see that he should sacrifice his right, either in the interest of the navigation or in the service of the public.

1203. But if the navigation stops from being unable to compete with railways under these heavy charges, what will become of the old lockowner then?—The old lockowner would have a great disadvantage in the circumstance that if the navigation ceased his old lock tolls would cease, but he would have this advantage, that if he were obliged to keep up the steam, and pen up the water for the purposes of his mill, he would have it undivided by any authority on the part of the Commissioners. Now, for two days in the week the millowner is very much hindered in his operation of conducting his mill by running his water away from his mill to serve the navigation. If the navigation ceased he would cease to suffer that inconvenience.

1204. Then if the navigation ceased he would get something in the place of his lock tolls by an increased use of the water?—To that small extent he would.

1205. Have these old lock tolls fallen off much of late?—Precisely in the same proportion as the tolls of the Commissioners, that is to say, in the 19 years ending in 1864, the Commissioners' tolls had gone down from 14,000 *l.* and some odd hundreds to 3,000 *l.* and a fraction, and the difference to the old lockowners must be in precisely the same proportion, namely, as 3 is to 14.

1206. How do you collect your old lock tolls?—By a clause in the Act of Parliament the Commissioners are called upon to preserve the old lockowner's rights, and to collect those tolls for him, and pay them over monthly, and to keep an account of all passing barges, and exhibit that account to the old lockowner.

1207. Then you are saved the trouble and expense of collection, are you not?—Precisely so.

1208. Are the rules of the Commissioners with regard to the water strictly observed?—I think they are; it sometimes happens that the interest of the navigation will be somewhat better served if the exact rule laid down is not observed, because the effect of running the water in one season, that is to say, when it is very short in the river, is different from the effect of running it at another season when it is very abundant; and occasionally, therefore, the absolute rule of the Commissioners is not observed; but in the main I believe that the millowners do carry out the instructions or rather the orders of the Commissioners with a considerable degree of fairness and justice.

1209. Has there been much conflict from time to time between the barge-owners, the persons interested in the navigation, and the millowners?—At times, and at various points.

1210. What have the questions been on which dispute has arisen?—There would be sometimes a dispute at Sandford, we will say, between passing barges; the sill of the lock at Iffley-pound next above, is so highly placed that unless the water is up to the high-water mark at Sandford there is not enough for a full-laden boat of coals to pass out at Iffley; if certain boats want to pass up they send down a message to conjure the millowner to see that the water is up at its height; if there are boats gone on from Sandford towards Abingdon, that is to say, down the stream, they want the water to flow on, they want it to rush on from Sandford to assist them in floating over an embankment that has lately grown up in the Thames; they want it to be drawn, while the other wants it to be shut, and they would contend between themselves as to when the water should begin to run or be shut in; and the millowner, I daresay, would have a natural bias to take care of himself; but in the main I believe that these quarrels with rough-tempered men are not very serious, and that they are adjusted with a degree of equity that does not leave much to complain of.

1211. We have been told that it is absolutely necessary that there should be a reduction of tolls upon the navigation to enable it to compete with the railways; what is your opinion on that subject?—I think that there should be; but I doubt if that would be enough.

1212. That would be necessary, you think?—It would be one step in the right direction, no doubt.

1213. Do you think that the owners of the old lock tolls would be willing to join with the Commissioners in a reduction of tolls, for the purpose of maintaining the navigation?—I have no doubt they would, if they could see their way to success when they had made that reduction; I believe that the reason why the old lockowners did not agree when the Thames Commissioners invited them, some years ago, to a general reduction was this: some of them said, "If I give up my tolls at my place, while the lock and all round it is getting into a fearful state of decay, the Commissioners have no money to repair it; for my own mill purposes I must keep it up, and therefore, if I sacrifice my tolls to them they will spend the money, perhaps, in repairs at other places, and leave me without my tolls to repair my lock; and therefore I shall hold on to what I have got, rather than part with it under such circumstances."

1214. But if you saw a fair prospect of the navigation being put upon its legs again by a reduction in the tolls and repairs to the works, do you think that the owners of these old lock tolls would be willing to join in any plan of that kind?—I do; I for one should be very glad to join if I saw anything like a security for keeping up the means of controlling the river and keeping it within its proper bounds, and keeping up the repairs of the locks. If I saw any degree of certainty that the payments of those charges which now belong to the Thames Commissioners to pay would be made out of the proceeds of a reduced toll, I should join very heartily if the others all join in any system of reduction that should facilitate the navigation; but if I may be allowed to do so, I would suggest that instead of any small effort of that sort there wants a much bigger and bolder remedy than a mere reduction of the charges. All the locks from the source of the Thames down to the district of the Conservancy, down to the tidal waters of London, are more or less in decay, and some of them in a very dangerous condition; they require to be perfectly and permanently repaired to encourage and facilitate the navigation, if navigation is to go on, and there is no mode of reducing tolls that will produce money soon enough to do such repairs as that.

1215. Sir *Francis Goldsmid.*] Are you aware that we have had witnesses before us who have said that they thought it would be possible to raise sufficient money by reducing the tolls?—I did not know what evidence the Committee had heard

heard; I wanted to show that it was a case of great magnitude, and that all the landed property in the valley of the Thames, from its source to London, is interested in keeping up the river, if not as a navigable river, at any rate in keeping it up in such a manner that it shall not go to decay at any point, and the water of the river become a mere rivulet. All the residential properties on the Thames are only rendered beautiful by the various pools of water that are formed near them, all the trade along the river is maintained at reasonable charges only by the continuance of the navigation, for though at present they do not send their traffic by the navigation, in consequence of the competition of the railway, the railway is kept in check very much by the existence of the navigation; and if they were not reasonable in their charges, then there would be boats on the river, and the navigation would go on to a much greater extent.

1216. *Chairman.*] Do you think that the population on the banks of the Thames value the maintenance of the navigation, and would afford traffic enough upon the navigation to make it self-supporting and remunerative?—I think they would.

1217. Do your mills use the navigation?—No; the time the traffic takes on the river and the cost are so much against it, as compared with the speed and the low charges of the railway, that at present the navigation cannot compete with the railway between London and that district; and in one sense they never would compete for the mercantile traffic of the various towns, because the railways are mostly so arbitrary that if they find a rival in any form on a canal or a river anywhere competing for their traffic, they lower their rates so as to command and obtain the traffic; but there is a great deal of traffic on the Thames so local that if reasonable facilities were offered, and lower rates were paid, it would continue to go by the navigation, and the railways could not possibly compete for it. Coal out of Staffordshire and out of Warwickshire comes to an immense extent *viâ* the two canals which work into Oxford, and is sent down the river I think as far as Reading, but at any rate to the various towns between Oxford and Reading, to a very large extent. The railway now competes for that to some extent, and if the tolls were lowered so as to induce people to bring the coal to that district by water, the railway would be shut out to a large extent from a traffic for which they now compete.

1218. Sir *Francis Goldsmid.*] Have you considered any plan by which the 20,000 *l.* or 30,000 *l.* which we have been told is required for these renovations and repairs should be raised?—I have thought that those of us who are locally interested in that portion of the country, as well as the navigation, should use all the influence we can upon the right honourable gentleman in the chair, and get him to induce the Loan Commissioners to lend 30,000 *l.*, in order, amongst other things, to purchase old lock properties, buy up fishing rights, and even, if that were wished, to buy mill property, so as to leave the river free to the use of the public as a navigation, and make it, what the river Thames ought to be, passing as it does by the University of Oxford and some of the most beautiful towns in England, a perfect pool of pure water, and delivered from the sewage now poured into it from all the towns along its borders.

1219. It does not occur to you, then, that if a new body were established, with power to improve the navigation, they could show such a security as to induce any private parties to lend them the necessary sum?—I have not gone minutely and carefully enough into that question to answer it decidedly. My first impression would be, that no private parties would lend on a security of that sort.

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1220. You say, that if the navigation were altogether abandoned, looking now to the interests of the lockholders, the old lockholders would gain something by being able, where they were millowners, also to use the water for their own purposes; I suppose, however, that that gain would be very small in proportion to the loss of the old lock tolls?—No doubt it would.

1221. Having regard to that fact, would you think that the old lockowners would be willing to do something analogous to what we understand the bondholders would be willing to do, that is, to take a comparatively moderate compensation for their interests?—I could hardly speak of them as a body, for I have never attended any of their meetings, and therefore I do not know the spirit that animates them in relation to it, but I doubt if they would. I do not think that any old lockowner having his income reduced at the present moment as it is, having the value of his property estimated by a proper person, would take 2 *s.* in the pound for that estimate as I heard it said here the bondholders would do.

1222. The bondholders at present receive nothing, whereas you have still an income, although a reduced one; but you would be willing to take, speaking generally, as I understand you, an allowance for that income?—I should, and I think that the body would, but I hardly like to speak for the body.

1223. *Chairman.*] There is a prospect before you if nothing is done of a considerable further reduction in lock tolls, is there not?—Yes, there is; and if the navigation is not sustained by some help there is the prospect before those of us who are old lockowners that the Thames Navigation Commissioners will not be able to keep up the necessary repairs which are now cast upon them, and therefore, with the reduced income of our tolls, we should have those repairs cast upon ourselves.

1224. Will you explain what those repairs are?—I refer, for instance, to cases where there is a weir or lasher where the water passes over in times of flood, or where an embankment is made to keep up the water that it may pass in its channel. The Thames Commissioners now, if the water passed over the banks and did damage, and ran away across the meadows, have the obligation of keeping that in order. When they had money and means they would send their men and repair the damage done. The millowner would be ruined by that not being done, and if the Thames Commissioners cannot do it he must do it himself in his own defence.

1225. Sir *Francis Goldsmid.*] You have said that if a mill were abandoned the millowner would still be obliged to perform for his toll the service of keeping the water, but of course the Commissioners would be willing to perform that service gratis or to pay the toll?—No doubt.

1226. Mr. *Neate.*] You seem to consider that the original owner of the Thames is the miller, and that the navigation has only grown up by sufferance

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sufferance as a permissive right?—That is the popular view of it, and I believe in it.

1227. Are you aware that the first Act of Parliament under which the Commissioners' Act begins, "Whereas the rivers of Thames and Isis have time out of mind been navigable," and that Act of Parliament nothing whatever is said about the rights of the millowners?—I do not know which Act it is in. I know that it is clearly put in one Act.

1228. One Act, after giving powers to the Thames Commissioners to set the high-water mark, has in a subsequent clause a proviso that they must not so set that high-water mark as to deprive the mills of their separate supply; you seem to consider that if the navigation were done away with, your obligation would be confined to this, that you would merely have to pen and restrain the water so that it should not flood the surrounding country, and that if the Commissioners did not do that, the duty would fall upon you; but have you considered that you would also have to provide for the navigation, and that you would have to construct your weirs so that boats would be able to go through as they used to do in the other weirs?—No.

1229. Assuming that the Thames has been navigable time out of mind, and that the right of the miller is subordinate to the navigation, and that you would have to open your weir to let through the boats, then the loss of the Thames navigation would be a positive loss to you, not only as owner of lock dues, but as millowner, would it not?—Yes, but I take it that that is an erroneous assumption. The intention of the law cannot be that the Commissioners shall establish a means of transit of their own, and sell their rights to pass through my property and my lock, and then let theirs go into decay, and then come back to me and say, "Now, we must have you made liable."

1230. Assuming that the old lock dues are extinguished, and that it is an open question, as far as regards the law, and that the Thames Commissioners come to you and say, "We will undertake to construct pound-locks, so as to economize the use of water for all the boats that pass, subjecting you to certain regulations as to the height of water, or we will give up our pound-locks, leaving you liable to let the barges through;" would you not rather, as a matter of money, accept the offer of the Commissioners to keep up their pound-locks for nothing; do not you gain, as millers, by the preservation of the navigation, compared with what your condition would be if all the Commissioners' locks were done away with, and you had to keep an open weir?—I take the spirit of the law to be, that so soon as my old lock toll ceased, either by Act of Parliament, or through any cessation of traffic on the river, my obligation to do anything should be at an end.

1231. Assuming that you would be under an obligation to keep and use the weir in such a way as to allow the free passage of boats by means of a windlass, do not you gain in money by the preservation of the navigation, as compared with what your condition would be otherwise?—As a principle, that does not apply in many instances in a property. In the case of a property of mine at Sutton Courtney, the old lock tolls were sold, and when I bought the freehold property the old lock tolls were bought by the Thames Commissioners, and they have ceased to collect them for the purpose of facilitating the navigation through that district. Subsequently to that purchase, the old lock belonging to the property ceased to be of any service, because the river being like a horse-shoe, a half circle, the Thames Commissioners cut a short canal across, out of one part of the river and again into another, so as to avoid coming near that old lock at all; they have established on that canal a lock which the barges pass, and where they collect their tolls. They have subsequently sold to me the right of the old lock on my property there, and I have built over it and filled it up: it would be impracticable, therefore, for them to come upon me and say, "We have done with you, and you must now find a lock through which the barges could pass."

1232. You might be called upon to make the best of what they would give you up; they would give you up, I presume, the new pound-lock, and you would use it in such a way as you best could, but you claim the right, do not you, as a miller, to keep the water at a certain height for the use of your mill, subject to the obligation only of not flooding the country, and subject to no obligation for the navigation?—Yes; the obligation is not only to hold the water in the mill, but also it has reference to the landowners in the surrounding districts.

1233. Your point is, as I understand, that as the Thames Commissioners have taken the navigation out of your hands, if it breaks down under their management, they have no right to throw it back upon you; that is your point, is it not?—They have no right to increase the obligations which already exist under the Act of Parliament.

1234. Your obligations to the navigation subsisted, I presume, many hundred years before that Act of Parliament; inasmuch as the Thames was a navigable river from time out of mind, and therefore, I suppose the millowners were always bound to let the boats through. Do any difficulties arise, to your knowledge, between the millowners and the Commissioners, as to the height at which the water is kept?—No, I think not; I have never heard of any: I have never had any such difference myself with them.

1235. Do not you remember any complaints of the water being kept up at too high a level?—Yes, many complaints of that sort have been made at Sandford, and at my other mill property, Sutton Courtney; but that depends upon the state of the river, and the flood-waters coming down. The very parties who sometimes complain that it is too high come and complain in the summer season that we do not pen enough for their cattle to come and drink.

Dr. Arthur Robarts Adams, called in; and Examined.

Dr. *A. R. Adams*.

1236. Mr. *Neate*.] I believe that you are Fellow of St. John's College, Oxford?—Yes, I am.

1237. You have had, I believe, for many years a good deal to do with the management of their property?—Yes, for some years.

1238. And they have a good deal of property in the vale of the Thames, above Oxford, have they

they not?—Yes, considerable property abutting upon the Thames, and also upon the tributaries of the Thames; they have also property below Oxford, which is in the Thames Valley as well.

1239. You have also property in weirs, I believe?—We have one weir which is called Rudge's Weir; we know it by that name at least; it is called in that map which is on the table Upper Langley Weir; that weir is on our property which runs from the Thames to the Ock, which is a tributary of the Thames coming in at Abingdon.

1240. I daresay you are aware that it has been urged on this Committee, on behalf of the Thames Commissioners, that it is desirable to keep up the level of the water above Oxford, in order to keep up the navigation below Oxford?—I have heard of such a proposition.

1241. What view do you take of that subject?—I can state that we have for years past been complaining of the level of the water in the Thames Valley, where the navigation is under the Commissioners; I think that it would be a great hardship upon the owners of the Thames Valley to have the water kept up for the mere purpose of supporting a trade (which I do not believe ever can be found) below Oxford; and, therefore, as interested in land in the valley of the Thames principally above Oxford, I should think it right to take every means that I know of to prevent such a scheme as that being carried into effect. The true view, I think, of the upper valley of the Thames is this; the navigation having entirely ceased above New Bridge, and being between New Bridge and the Duke's Lock, which is on the Oxford Canal, of a very small and unimportant character, I think we are entitled to say that the primary object of the Thames is drainage, and not navigation. Between Oxford and Ensham, which is the place where you may say the Duke's Lock comes in, there is no navigation at all; Godstow Lock, which is the principal lock between the two, is in so dilapidated a situation that it would be dangerous for boats to attempt to pass through it. I may say generally that as far as I know anything of the locks above Oxford, they are in a very inefficient state; they were reported so in 1853, by Mr. Treacher, whose report I have here, who was at that time the Thames navigation surveyor. That report sets out that all the locks and weirs above Oxford are of an inefficient character, and require very large repairs; the state of the navigation has been such, and the state of the funds of the Thames Commissioners has been such, that substantially nothing has been done since 1853, and the result is that each year the Thames is getting very much worse above Oxford than it was before; sandbanks are growing up, and islands are forming; the river is never dredged, and the consequence is that the whole state of the river is very discreditable to any body of Commissioners who have ever had anything to do with it. I confine my remarks to the part above Oxford.

1242. You consider, then, I suppose, that the navigation is favourable, as assisting in the object of keeping the bed of the river in a good state?—No.

1243. You say, do you not, that since the navigation has been disused, the bed of the river has got into a bad state?—The same obstructions exist now with reference to the weirs as did before the navigation ceased; but whereas formerly it was the interest of the Commissioners to dredge the bed of the river, in order to get the tolls from the boats, they now have ceased to do so; there are no boats to come up, and the water now coming down charged with silt, is stopped at the various points, and in that manner islands are formed. A bough of a tree coming across the river, or a great root being landed on a sandbank, will collect a great quantity of silt, and gradually become a small island.

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1244. As a matter of fact, the Thames Commissioners, for some years, have interfered very little, have they not, with the management of the upper part?—Not at all, for some years.

1245. Not even indirectly the level of the water?—I find that in 1853 or 1854 they altered the levels in various places, but practically speaking, in the last few years we have not been interfered with. But this state of things existed; supposing we had wanted to get a Drainage Commission (which I think is essential for the upper valley) established from Oxford to Lechlade, we could not do it under the General Drainage Act, without the consent of the Thames Commissioners, it being provided by the General Drainage Act of 1861, that we cannot interfere with a river where there is a Navigation Commission, and if I had taken the trouble (as I was prepared to do) to get the landowners to consent to a Drainage Commission being established, we should soon have found that the Drainage Commissioners' views and the Thames Commissioners' views were antagonistic, and we should have had to yield. It is difficult to get them to work in harmony.

1246. Mr. *Dawson Damer.*] Or even to have the same ideas on the subject?—Yes.

1247. Mr. *Neate.*] The Thames Commissioners, as I understand you, have interfered very little, of late years, with the level of the water?—They fix it.

1248. As a matter of fact, the water has been kept up, has it not, at its inconvenient level by the weirs?—Yes, they are the only things that can keep it up; there are no locks from Pinkhill Lock just above Ensham, and Rushey.

1249. As a matter of fact, it is rather the fishing rights or the abuse of those rights, is it not, that have interfered with the level?—I do not think so; I think that the fishing rights have been made a mere stalking horse of, and I cannot help thinking that that has been done for the purpose of keeping out of sight the real grievance. I do not believe that the landowner exists who having fishing rights on the river would not (if he had pointed out to him the injury received by the land from the high-water level of the river) be willing to give up his rights. We have a fishing-weir now; we were called upon some years ago (it was then a manorial lease, but has just come into hand) to expend a large sum of money and cut down timber to repair it, it being our duty to repair it as weir-owners upon the Thames.

1250. That weir was under lease, you say?—It has now just come into hand.

1251. Whatever desire, then, the College might have had to deal with it before, they had not the power to deal with it?—We never heard anything of it before.

1252. As a matter of fact, the water has been kept up at this level, has it not, by the owners of weirs?—

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weirs?—Yes; but that level is fixed by the Commissioners.

1253. Has it been kept up higher than it ought to have been through the neglect of the Commissioners?—I never heard it so stated; I think that most of the people who own those weirs are so interested in the cultivation of the lands near the river, that they would desire to lower the level of the water; I was at Pinkhill Lock on Friday last, and when I asked the man, "Who has the fishing rights at the weir?" he laughed at me," and said, "Do not imagine that that is of any importance."

1254. Mr. *Dawson Damer.*] Have you ever seen any fishing-nets up there?—The way in which they fish is by baskets fixed to the weir.

1255. Have you seen any nets?—I have seen them using them; they are kept up, I may say that. We have another large portion of the water which is not in hand; it is still on a lease which is running. We are altering the management of our property very much in that neighbourhood, and these old manorial rights are gradually coming into hand. There is a man who rents the water of our lessee over a certain extent, and I know that he makes a living out of it.

1256. Mr. *Neate.*] Do you mean by keeping the water up to a higher level than is right?—I will not say that, but I know that if he does it, he does it to our injury.

1257. The landowners in the neighbourhood are endeavouring to remedy these evils by the construction of a bank, are they not?—They are. Below Northmoor, in the parish of Stanton Harcourt, there has been a bank erected against the river, which carries the water below Pinkhill Lock, close down to Ensham Weir; that is an extensive bank, and is now in operation, and the result of it is that all the land lying outside of the bank is very much improved, because it is impossible now for the floods (at least when I say impossible, it is very unlikely) of the Thames to find their way up in that direction, inasmuch as they have carefully dammed back the river at all the points where it runs in on the higher level. But it is a very great question in my mind, whether by doing this they have not at the same time, to some extent, injured the lands lying between that bank and the Thames, inasmuch as when a flood comes, the river remains higher on the meadows than it would have done. We have had a scheme of the same nature put before us for the parish of Northmoor, which is now under consideration, and before we consent to that (for, as we are interested in lands on both sides of the valley, it is desirable that we should know whether we should lose as much on one side as we should gain on the other) we have sent for a practical drainer to give us his opinion on the subject. Other landowners have consented to it already, but we, having interests on both sides of the river, are more careful. There is no doubt, however, that the one at Stanton Harcourt has to a great extent succeeded in draining and relieving from water the land far away from the Thames.

1258. The effect, you think, would be rather to precipitate the floods on to the lands which those embankments do not protect?—I am rather inclined to think that it would throw the water on to the Berkshire side. The sides of the river, about the part of which I am speaking, are totally of an opposite character; we have a great deal of land on the Berkshire side, which is high, and there of course no floods can come; it is 20 feet above the level of the river, but there is a very small foreshore; on the Oxfordshire side there is a large tract of flat land, meadows of a very valuable character, which are very much injured by the backwaters of the Thames; the meadows are slightly hollow in the centre, and the water tails up there and stops there.

1259. Are they below the high-water mark?—At the back they are.

1260. You know that as a fact, do you?—Yes; you can see it distinctly marked.

1261. Are you aware of the bed of the Thames having been raised of late years by neglect?—Practically, I am not aware of that fact.

1262. May not legal difficulties arise out of the construction of these embankments?—I would rather not answer that question.

1263. Speaking as a lawyer, are you very clear of the right, or, is it the case, that you are not prepared to say that the right to make these embankments is a very clear right?—Of course you cannot make them when landowners are not willing to make them; and we cannot make them, *invito domino*, I should say, as a lawyer myself.

1264. Two or three landlords may agree, I suppose, but the other side of the river, or those not protected by banks, may not agree?—I believe that in this particular instance, at Northmoor, it is intended to carry it out under the General Drainage Act, and if that is the case, all persons who have interests direct or indirect are able to interfere and prevent the carrying out of a scheme injurious to their interests.

1265. You would throw it then upon the Thames Commissioners, if they did not approve of it, to oppose the scheme?—I rather think we have ignored the Thames Commissioners in this matter.

1266. Mr. *Dawson Damer.*] Do you suppose that the locks are injurious to the lands?—Yes; at Cassington and Yarnton there is a quantity of land that is very much interfered with by what they call the Duke's Lock. There is no question that the high level of the water above Oxford does diminish seriously the rent of the meadows abutting upon the Thames. No land surveyor will give you any other opinion, and I should (if I might venture to suggest a remedy) suggest that above Oxford, at least, we should have a Drainage Commission; that it should be compulsory to form a Drainage Commission for the purpose of regulating the waters all above Oxford, up to the source of the Thames, and also all the tributaries of the Thames (for it is useless doing one without the other), and it so happens that there is no place more favourably situated for that scheme to be put in force, as there are no mill rights between Lord Abingdon's mill at Wytham and Lechlade; there is not a single mill existing upon that part of the river; there are some mills upon the tributaries, but none upon the main stream; and therefore the Commission who would have to deal with the fishing rights (for which I really do not entertain any respect at all), and the right to keep up these locks, and also the Thames Commissioners' rights, would have no difficulty about mills. But I venture to hope that the result of this inquiry will be, that the Thames Commissioners will cease, at any rate above Oxford, and that we shall be put under a Drainage Commission, and not a Navigation Commission.

1267. Would you put aside all navigation entirely?—

entirely?—I think it will very soon cease of itself; it is now very difficult to carry it on in the summer, and the result of the railroads now opening in that district will be such as to make it not worth while to continue it. Perhaps you are aware that the East Gloucestershire Railway has passed, which will carry traffic to towns that now might be supposed to be served by the Thames; but there really is no traffic west of New Bridge, which is about, as the crow flies, from Oxford, 9 or 10 miles; above that there is nothing. I asked the other day at New Bridge when a boat had last gone by, and I could not find that a boat had gone by this year.

1268. Colonel *Knox.*] The navigation is at an end 10 miles above Oxford, you say?—Certainly.

1269. And you would not recommend any expenditure for the navigation purposes there?—No; not above Oxford at all.

1270. Mr. *Neate.*] What do you say about the river below Oxford?—I cannot help thinking that, considering the rights of riparian owners, it is not at all right that they should be compelled to keep up the level of the water to a point where their revenue is diminished, for the sake of subserving another interest in another part of the river.

1271. Colonel *Knox.*] I think I understood you to say that you conceived that the drainage question was of far greater importance than the navigation question?—Certainly.

1272. In saying that, I suppose you are only looking to what your interests are above Oxford?—I am looking to the fact that we know agriculture is going through a phase of competition; it is necessary that land should be put into the highest state for it to be cultivated; and as long as the land is undrained or inefficiently drained, the best tenants will not come, and you cannot get the best crops.

1273. Therefore, you completely ignore the navigation of the river from Oxford downwards?—No, I ignore the navigation of the river above Oxford. If you can so arrange that the water above Oxford shall be used for the purposes of the navigation below Oxford, consistently with the right of the landowners to have their level kept, so that their drainage shall be complete, I have not the slightest objection to raise to such a scheme; but I submit that drainage is the first principle, and that navigation is the second principle in this case; above Oxford I mean.

1274. Mr. *Hankey.*] You do not interfere in the question at all below Oxford in anything relating to navigation or mill-owners?—No; at present I have said nothing of that. I am also a Commissioner under the Local Government Act for the University of Oxford, and I know that our sewage operations are very much interfered with by the necessity of keeping up the embankments of the Thames Commissioners; we shall have to execute very heavy works from the city of Oxford in a few years. At present we drain into the river, but it is quite certain that we shall not be allowed to drain into the river much longer, and therefore we shall be compelled to take our sewage to a lower point.

1275. Mr. *Baring.*] Can you explain to the Committee how you would propose this Drainage Commission to be constituted?—Yes; there is a provision in the General Drainage Act which enables Commissions of this sort to be issued, and I do not know that the machinery could be better than is there provided; they would elect a certain number of persons to represent the different parishes or properties, and those persons would meet and subdivide themselves into committees, and have a general superintendence over the river.

1276. It would merely be necessary, you think, to put into action powers already given?—Yes, I conceive so.

1277. What would prevent that being done at present?—The fact is that the Act of Parliament expressly forbids it where there is a Commission for navigation.

1278. You would simply require them to take away the hindrance which now exists?—Yes; I think that considerable pressure would have to be used on a good many of the owners to make them see their real interests in this matter. It is very difficult to explain to gentlemen not resident on the banks of the river the injury done in various ways to them by floods; but I have no doubt, if it were a free question, that it is of such importance that the proprietors in the valley could be induced to form such a Commission.

1279. Does it require the action of a majority?—Yes, and a specified majority.

1280. Then you would be content, would you, to run the risk of such a Commission not being adopted, supposing the powers now belonging to the Thames Commissioners to be abrogated?—Individually I should; but that might be a very different question; I should be much better satisfied if this Committee, sitting upon the state of the Thames, were to report that a Drainage Commission ought to be established.

1281. You think that the mere report of the Committee would have a good effect?—Yes.

1282. In one respect you would be glad to see the powers of the Thames Commissioners abrogated above Oxford?—Certainly.

1283. Mr. *Neate.*] Have you considered how much you would wish the high-water level varied?—That is an engineer's question, and I would not like to give any opinion upon it; the map which I hold in my hand will show how extraordinarily the river runs above Oxford, and how very circuitous the stream is.

1284. Mr. *Bathurst.*] Your opinion is, as I understand, that the water should be allowed to run away as fast as possible?—I do not quite think that. I am not prepared to say that under certain circumstances it is not desirable to keep the water at such a point as to feed the roots of certain grasses; but if it is kept too high, the water grasses would become the predominant feature in the valley.

Mr. James Castle, called in; and further Examined.

1285. Mr. *Neate.*] Since this Committee has been engaged in this inquiry, have you received a letter from a pound-keeper, stating that a pound was in imminent danger, and required the immediate attention of the general surveyor, and have you inspected that pound and found that to be the state of the case, and ordered repairs at your own risk and cost?—Yes, and I have a letter here from Bell Weir on the subject.

Mr. JONATHAN THORP, called in; and Examined.

Mr. J. Thorp. 16 May 1865.

1286. *Chairman.*] WHAT office do you hold in connection with the River Thames?—I am the Deputy Chairman of the Thames Conservancy Board.

1287. Who is the chairman?—The Lord Mayor for the time being is *ex officio* the chairman.

1288. How long have you been deputy chairman?—About eight years.

1289. You have nothing to do with the navigation of the Thames above Staines, have you?—No, nothing above what is called the City Stone at Staines.

1290. Do you exercise any powers in common with the Thames Commissioners as the managers of the upper navigation?—None that I am aware of.

1291. You are quite distinct, are you?—Quite distinct.

1292. But in the management of the navigation below Staines, do you make any arrangement for sending traffic right through to Oxford?—We have no such arrangement.

1293. How far would your lower navigation be affected by the upper navigation being kept up or allowed to fall into disuse?—Our through traffic, passing beyond Staines, is now very small.

1294. If the navigation above Staines were given up altogether, you would not lose much, you think?—Not a great deal.

1295. Have you any idea how much it would be?—I cannot give the figures, but it is very small; I will put in a statement of the amount.

1296. Do you know much about the traffic above Staines on the navigation?—I have only a general knowledge of that part of the river between Staines and Oxford, and of the towns there; and I can form a pretty fair opinion as to what the traffic would be if the works were in a proper state, and if the tolls were reasonable; now, the tolls are prohibitory, I take it; they keep traffic from the river.

1297. What, in your view, would be the increase of the traffic if the tolls were reduced to a proper degree?—Before railways were established, the through traffic on our district amounted to about 8,000*l.* a year; our total traffic at that time amounted to about 14,000*l.*; we have held our own tonnage, but we have been obliged to reduce our rates; our receipts have fallen from 14,000*l.* to 6,000*l.* If the traffic represented by that 8,000*l.* had been retained, though at reduced rates, we should now be receiving 9,000*l.* a year.

1298. Mr. *Neate.*] That 8,000*l.*, as I understand you, was what you did get through the Thames Commissioners?—Yes; and if by improving the works and lowering the tolls they brought back the amount of traffic which they had before, if they were enabled to do that which we have done, that is to say, keep their own in amount of tonnage, the income would be about 3,000*l.*

1299. That is more than we can get now, is it not?—That is because you have driven the traffic off the river by the state of your works.

1300. Am I to understand that you think that from that navigation in its declining state you are likely to get 3,000*l.* and odd?—I think that until you put the works into a proper state and reduce the tolls, you will not increase the receipts at all.

1301. From the traffic that comes down to you from the upper part of the river, do you look to get 3,000*l.* and odd?—In all probability the amount would increase in our district to that extent.

1302. *Chairman.*] What is the constitution of your trust?—We are a body corporate by Act of Parliament.

1303. How is the corporation composed?—We have the Lord Mayor and six representatives from the City of London, two from the Admiralty, one from the Board of Trade, and two from the Trinity Corporation, the Deputy Master and one of the Elder Brethren; we have two representatives of shipowners, two representatives of owners of lighters and steam-tugs, one representative of wharfingers, and one representative of passenger steamers, making 18 in all.

1304. From what sources do you derive your income?—From tonnage dues paid by shipping that enters the lower part of the river, and from the tolls of the upper portion of our navigation, from rents and charges for accommodation on the banks of the river, and from a few other sources.

1305. What is your annual income?—About 40,000*l.*

1306. What is your expenditure?—About the same amount.

1307. Have you got any loans?—We have a debt upon our upper navigation now of about 120,000*l.*

1308. What rate of interest do you pay on that?—Three and a half per cent.

1309. How is that secured?—On the tolls of the different locks of the navigation.

1310. Is the loan secured upon your whole income?—By the Thames Conservancy Act of 1857 the whole income is made liable for the payment of interest on that debt.

1311. That is your whole debt, is it?—That is our whole debt.

1312. I suppose that your bonds are good marketable security, are they not?—Yes, they are marketable, and the security is very good.

1313. Do you know anything about the management of the upper navigation above Staines?—Very little. The Corporation of London, I remember, on several occasions, tried to arrange through rates with them for the traffic, but the attempt was always unsuccessful. I know that the Commissioners are a numerous body, something like 800 persons, and I know the composition of the Commission.

1314. What is your impression of the prospects of the navigation as it now stands, supposing nothing is done, and the Commissioners are left to manage it as best they can?—There will be an end of it, of course. If the works fall to pieces, the traffic will leave the river. I see nothing else.

1315. Do you see any prospect, from your knowledge of these things, of the Commissioners being able to raise any money to put their works in order, and give a chance to the navigation?—I think that if the Commissioners would amongst themselves subscribe the necessary amount, they might accomplish that.

1316. You do not think that anybody would lend them anything?—I think not.

1317. Mr. *Dawson Damer.*] As the Commissioners live nearly all of them upon the Thames, they

they ought to subscribe, ought they not?—I do not know that.

1318. *Chairman.*] I suppose that the Thames Conservancy feel an interest in the question of the upper navigation, and would regret to see it abandoned?—We should regret it very much, and we should be glad to see a return of the through traffic.

1319. In fact, if it cease altogether there will be some loss to your navigation, will there not?—There would be some loss.

1320. And the chance of future gain would be at an end?—Yes.

1321. Have you thought of any plan at all to get them out of their difficulties?—The first thing would be the acquisition of the necessary funds to put the works into a proper state. Of course, that must be the first move.

1322. Have you thought of any mode of getting that money?—Certainly; it might be done by borrowing upon some kind of security.

1323. But where is your security?—Of course, the security would be the future tolls of the upper navigation; they must be pledged, and perhaps if the navigation were placed in proper hands a sum of money might be obtained on the security of the future tolls, that is to say, if the public could reasonably believe that it was placed in hands that would make it successful, and could have the assurance that it might be so managed as to bring upon it sufficient traffic to produce an annual income. If the public did not see that they would not, of course, lend sixpence; there must be a strong probability of there being a good traffic upon that part of the river to induce people to lend.

1324. You do not think the present Commission, perhaps, to be the proper hands to manage the navigation?—I would rather not answer that question.

1325. Do you think that there might be some alteration in the composition of the present trust and the powers they exercise?—I think that it must be placed in the hands of good men of business, accustomed to take charge of an important navigation.

1326. You think that something is to be made of it if it is properly handled?—I do, indeed; I think that it would be a great pity to see that navigation shut up, having the important towns that it has upon its banks, and communicating with the metropolis. Now, if you look at the lower part of the river, even round into the Medway, you will find that there are barges passing to and from almost every village on the banks to London, a distance of almost 80 miles. Wherever a hard can be placed, or a wharf constructed, there you have barges plying; they bring agricultural produce up to London and take manure back, and that is an important trade, and one most important to the people carrying on business on the banks. I think it very probable that if facilities were given for it, there might be the same trade between London and the upper navigation.

1327. Sir *Francis Goldsmid.*] In your part of the river you are not so fixed with the old lock-owners?—No.

1328. *Chairman.*] Throughout the whole of your navigation there is a considerable quantity of this local traffic carried on, is there not?—Yes, where a hard can be placed there are vessels regularly plying.

1329. Mr. *Dawson Damer.*] You have no locks there to interfere with you?—No, but sailing barges must have a crew, and they are not worked except at a considerable expense.

1330. *Chairman.*] Do you know anything from your own observation of the works in the upper navigation of the Thames?—Very little. I have seen the report. I have seen some of the locks, and those that I saw were in a bad state.

1331. Have you ever heard the question discussed as to whether your Board would co-operate in any way to put this upper navigation into a proper state?—I have heard a strong desire expressed that the navigation should be kept open, and put into such a state that traffic should be encouraged on that part of the river, and I have heard an intimation that the parties with whom I am connected would be glad to render any assistance in their power.

1332. Mr. *Neate.*] To the extent of lending money, do you mean?—We have not any money to lend.

1333. *Chairman.*] But you have, as you have stated, a direct pecuniary interest in keeping in existence the upper navigation?—Yes.

1334. Therefore, it is natural to suppose that the Conservancy Board of which you are the deputy chairman, would be, if possible, desirous to co-operate for that object?—We are very desirous of seeing the upper navigation put into a proper state, and we would give every assistance that we could reasonably and legally give.

1335. Some people tell us that the railways make it impossible that that navigation can go on; what is your view on that question?—Water communication is more suitable for some traffic than railway. I have mentioned, for example, agricultural produce; it is far more convenient to convey those articles by barges than in railway trucks. Then as to manure again; I have seen manure in railway trucks certainly, but it is a kind of traffic that railways do not care for. Then for timber; it is much better to send timber by barges than by railway. There is a very large class of traffic which it is much better for all parties should go by water rather than by rail.

1336. Mr. *Dawson Damer.*] That would apply even to coals, I suppose?—The coal merchants prefer the water carriage to the railway carriage. I should state that when I spoke of the amount of receipts for through traffic on the upper navigation (in 1837 I think it was) there was no coal at that time brought down the canals into the lower district, and probably if the navigation were put into a proper state, a considerable quantity of coal would pass from the Leicestershire and Staffordshire collieries into the lower district. It is very probable that a trade which did not exist at that time would spring up.

1337. Colonel *Knox.*] Has it ever occurred to you, in the event of the navigation of the upper part of the Thames being entirely abandoned, what effect it would have upon the water below Staines, under your jurisdiction?—We think that the supply of water would be about the same, and that however disastrous it might be above, still the same quantity of water would come to us.

1338. Sir *Francis Goldsmid.*] Would not it come more irregularly than now?—I can hardly say; not very much more so, I should think; it might, to some extent.

1339. *Chairman.*] How many miles of this upper navigation are under the Thames Conservancy;

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vancy; how much of it have you to deal with?—From London Bridge to Staines, that is 36 miles.

1340. Where is your first lock?—At Teddington.

1341. And how many locks have you between Teddington and Staines?—Five.

1342. Have you any direct railway competition with your upper navigation?—Yes, on both sides of the river.

1343. You have retained, as I understand you, as great a tonnage as you had before the railways were established?—Yes, on the whole. Even as high as Weybridge, where the River Wey joins the Thames, and the Wey navigation begins, where they have reduced their tolls, and encouraged traffic, we carried as many tons in 1864 as we did in 1837; and in the lower part of the river near London our tonnage has increased very much.

1344. Taking it from Teddington upwards, where you begin your locks and your proper upper navigation, how does your tonnage stand there? — At Kingston the tonnages have increased; higher up, at Hampton, the tonnages have increased, and at Sunbury too there has been an increase. Then, higher up, the amount is about the same.

1345. Then you may be said on the whole to have retained your trade, notwithstanding the competition with the railways?—Yes.

1346. Mr. *Henry Fenwick.*] Measured, that is to say, by the amount of tonnage, not by the amount of receipts?—That is so.

1347. *Chairman.*] But you have reduced your tolls very considerably, have you not?—Yes.

1348. In what proportion?—Nearly two-thirds; but I had better, perhaps, hand in a table showing that.

1349. Is the income from tolls on that upper navigation, where it is expensive, where there are locks and so forth, sufficient to maintain it without drawing on your income from other sources?—Our income from tolls on the upper navigation now enables us to pay the interest on the debt, and to keep the works in repair; to do all necessary works.

1350. Mr. *Hankey.*] What proportion of the debt is due to the upper part of the navigation?—There is but one debt, and that is a sum borrowed upon the security of the tolls of the upper navigation.

1351. How much was borrowed upon that security?—At first about 170,000 *l.*; that has been reduced by degrees.

1352. But what is the amount of the debt now with regard to which you say that the tolls are sufficient to pay the interest of that debt?—It is now about 120,000 *l.*

1353. That is the whole debt, is it not?—Yes.

1354. There is no debt on the lower part?—No; but on the whole receipts we are liable for the payment of the interest on that debt.

1355. *Chairman.*] The income derived from those tolls above Teddington, and between Teddington and Staines, would be sufficient to pay the interest upon that debt, and keep the locks and works in repair; is that so?—The upper navigation now pays the interest, and pays its way, and leaves something over.

1356. When you speak of the upper navigation, you mean all between London Bridge and Staines, do you not?—Yes; the works are constructed under the powers of the Navigation Acts; those works consist of locks, weirs, and towing paths, and artificial works in the upper part of the river.

1357. Mr. *Hankey.*] Where does the upper navigation commence?—At London Bridge; but the towing-paths and the works commence at Putney.

1358. *Chairman.*] There are some tolls payable before you come to Teddington, are there not?—Yes, there are tolls payable at Kew for the use of the towing-path.

1359. Have you any incumbrancers or persons resembling the old lockowners upon that upper navigation?—None, happily.

1360. There is no drag, then, upon your income?—No charge except this 120,000 *l.* of debt.

1361. Mr. *Henry Fenwick.*] We had evidence the other day about a considerable sum being paid to the Crown out of the funds of the Thames Conservancy; can you give us any information on that point?—It is not out of the funds, but out of the rents and fines. If the conservators make a grant of any portion of the foreshore, or give permission for any accommodation to be placed on the foreshore, the value of the land granted, or the value of the accommodation must be assessed; two-thirds of the receipts pass to the conservancy, and one-third goes to the Crown.

1362. Does that go to the Crown as owners of the soil of the river?—The soil of the river is vested in the conservators; it is vested in them by agreement, and upon certain conditions, that two-thirds of all rents should be the property of the conservators for the use of the public, and one-third the property of the Crown.

1363. Before your Board was formed, the soil and freehold of the Thames was vested in the Lord Mayor and Corporation of the City of London, was it not?—There was a dispute about that for many years; the Corporation of London claimed the bed and soil of the Thames, and the Crown said that it was vested in the Crown; they had a dispute which lasted some 14 years; it was compromised, the conservators taking two-thirds for the use of the public, and the Crown having one-third; and the agreement was sanctioned by Parliament.

1364. Sir *Francis Goldsmid.*] Have you considered whether the prospects of the upper navigation are sufficiently hopeful, if it were to be put under proper management, to justify your Board, if authorised by Parliament, in pledging their credit in order to raise the 20,000 *l.* or 30,000 *l.* necessary for the purpose?—I hope that the prospects are sufficiently good to induce a belief that the money might be raised on the tolls of the navigation beyond Staines, but I do not think that it would be fair to pledge our tolls or any of our income for the purpose of putting a bad navigation into a proper state.

1365. Mr. *Henry Fenwick.*] Your tolls are already mortgaged for the 120,000 *l.* debt?—Our income is liable for the payment of the interest upon that debt; that amounts to about 4,200 *l.* a year, and our income is 40,000 *l.*

1366. *Chairman.*] Does the management of the Thames in the upper navigation affect you in regard to the supply of water; have you had reason to complain of the management of the water above affecting the navigation of your part?—I have not heard of any complaint.

1367. You have not heard, as I understand you,

you, any wish expressed that your Board should have any control over the management of the water in the upper navigation?—I have not, so far as regards the supply of water.

1368. Is the navigation sometimes stopped on your part of the upper navigation for want of water?—I have not known such a thing; it may have been so only for a very short time, perhaps an hour or two; but I am not aware of any case in which that has happened.

1369. You have not then found any unwillingness on the part of barge-owners to let their barges go at all seasons into your navigation, from fear of detention?—No.

1370. Mr. *Baring.*] Have you found any difficulty in managing the navigation of the river between London and Staines, in regard to the locks, and so on?—Not the slightest.

1371. Have you an officer appointed for that special purpose?—We have several officers who have different duties in that district; we have an engineer and a foreman of works, a sub-foreman and toll collectors; there is no difficulty in the management.

1372. How many miles more river would you have to manage, supposing the navigation between Staines and Oxford were placed in your hands?—The distance from London to Oxford is 115 miles; it would be 78 miles more, if we had the navigation above Staines.

1373. Do you apprehend that you will find any difficulty in managing that navigation, supposing it was entrusted to you by Parliament?—It would be the management of about 26 additional locks; I think in all probability our engineering staff would be sufficient; we should want very little increase in that, the principal increase would be in labour. I think that our skilled labour would be sufficient, but that we should want an increase of ordinary labour.

1374. Your powers of superintendence, I understand you, you think would be sufficient?—Yes; and I think that our plant would be sufficient; I mean our barges and vessels necessary for the repair and maintenance of the locks; I think that those would be sufficient for the purpose.

1375. It would follow therefore, would it not, that the river would be more economically managed if put into your hands than if put into the hands of a separate body?—I think so.

1376. Is there any essential difference in the works, locks, and so on, between Staines and Oxford, as compared with those between Staines and London?—Our works are, I may say, of a very permanent character,—stone and brick—and the works of the upper navigation are principally of wood, and probably it might be deemed proper to keep them so.

1377. Do you think that in order to preserve the through traffic which passes through your part of the river, it is necessary to keep the navigation of the Thames open higher than Oxford, or only as far as Oxford?—I think that in the first instance it would be better to take steps to keep it open as high as Oxford only; afterwards it might be deemed desirable to keep it open further, but certainly at first I would not suggest that any steps should be taken to construct such works as would be necessary above Oxford.

1378. Would you have any fear of there not being enough water at Oxford if there was a Drainage Commission, as suggested by the last witness in the upper part of the river?—I am hardly in a position to answer that question.

1379. As to the expense of putting the river between Staines and Oxford in proper order, are you able to form an estimate of that?—The Committee have had evidence, I think, on that point.

1380. Do you agree in the estimate which has been mentioned?—It seemed to me reasonable; a sum of between 30,000 *l.* and 40,000 *l.* would be sufficient, I think.

1381. You have stated that other arrangements with respect to the traffic between Staines and Oxford would benefit your part of the river, that is to say, that if the tolls were lower, more traffic would come on your part of the river, and so increase your revenue below Staines?—Yes.

1382. Therefore you would directly benefit by those arrangements if they were made?—Yes, to a small extent.

1383. Would not that be a sufficient ground for taking the small liability of this upper navigation upon the general funds of the Thames Conservancy, especially as you have already said that the tolls themselves would meet the expenses?—That is entirely a matter of opinion; I feel a great disinclination to our taking anything more upon the tolls of the lower district, or pledging them for any purposes but those for which they are already pledged by Parliament.

1384. Would you consider, supposing this part of the river was put into your management, that it would be right that any representatives, say of the City of Oxford or other towns upon the river, should be added to your Board?—I should like to know for what purpose they should be added.

1385. If they were added for the purpose of representing the interests of those towns, would you approve of the addition?—What we require at our Board is intelligence and good management.

1386. You would prefer the Board being as it is?—Certainly.

1387. Mr. *Hankey.*] Do you think that the present constitution of the Board would be quite equal, seting aside any question of pecuniary interest, to taking the management of the upper water between Staines and Oxford?—Yes; I think that there would not be the slightest difficulty.

1388. Do you know at all why the arbitrary line of Staines was fixed upon as the limit of the jurisdiction of the Conservancy?—No, I do not, indeed.

1389. Do you see any reason why that arbitrary line should be now continued?—No special reason.

1390. If you were satisfied that in a pecuniary point of view you would not be sufferers or run any risk, you perhaps would not object, as a member of the Board, to undertake the duty of managing the upper navigation?—I think that our Board would be delighted to learn that the Commissioners of the upper navigation were able to put it into a good state and to keep it so, and willing to reduce the tolls so as to encourage through traffic. But if Parliament desired our Board to undertake the duty of almost reconstructing and managing the upper district, I think our Board would be disposed to do so, but by no means to seek it or desire it; we should be delighted to hear that the whole matter was settled, and that the Commissioners of the upper navigation were able to do all that was necessary.

1391. But

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1391. But if Parliament, on the recommendation of this or some other Committee, thought it absolutely necessary to make some change, could you suggest any public body which would be more likely to undertake it than the body which you represent?—No, I do not know of any.

1392. Do you think, with regard to your pecuniary risk, that you could borrow money, giving only as security the income from the upper works above Staines; would you have any difficulty in obtaining loans pledging only the security of those particular works, in the same way as I believe the railroads borrow money on the security of a particular portion of their line?—I think it very probable that we should be able to raise money.

1393. The pecuniary question is the one that appears to weigh most in your mind?—I think that we should be able to borrow money.

1394. Do you think that a body of Commissioners, sitting as your Board does in London, would have any difficulty whatever in managing a river navigation and other matters connected therewith, between London and Oxford?—No difficulty, I think.

1395. And you would not propose or desire to have any Local Commissioners for the purpose of giving you additional information?—I think that it would not be necessary.

1396. You have power, I believe, now to adjourn your meetings as you may see desirable, and to meet at particular places?—We may meet where we please; it is our practice to pass up the river very frequently as far as Staines.

1397. Would you think that your power of employing persons either of local experience or of special scientific knowledge, would give the opportunity of having quite as much information as Local Commissioners could have?—I think that if the Conservators of the Thames take charge of the upper navigation, some of their committees would frequently visit all parts of the upper navigation, and that they would not require any local assistance.

1398. There is a small payment to your Commissioners now, I think?—There are 18 Commissioners, and we have 1,200 *l.* a-year to divide between us.

1399. You have found that system of paid Commissioners answer, have you?—They are paid according to their attendance; so much for each attendance.

1400. You find the attendance regular, do you?—Yes.

1401. I think you entertained a little doubt originally, did you not, about the mode of payment?—I always thought that the Commissioners should be paid.

1402. Doubt was expressed as to the propriety of paying the Commissioners, was it not?—I think not, it always seemed to me reasonable.

1403. However that may be, the system of paying the Commissioners, which did not exist previous to the late Act, has been found to answer?—Yes.

1404. Mr. *Bathurst.*] Would the powers which you already possess over the lower part of the river if applied to the upper part, be sufficient for you to regulate it entirely, or would you require fresh powers?—We should require fresh powers.

1405. You would have no power over the millowners, I presume, unless fresh powers were given you?—Certainly not.

1406. Mr. *Hankey.*] You would require an Act of Parliament?—Yes.

1407. *Chairman.*] You would like to start fair, and with no burdens?—With no burdens.

1408. Sir *Francis Goldsmid.*] In answer to a question which was put to you, whether in the event of the Conservancy having the management of the upper navigation, you would approve of some additional members being placed on the Board to represent the upper part of the river, you said that what you wanted on your Board was intelligence; would you have sufficient confidence in the competency of persons on the upper part of the river to elect men of intelligence; would you object to, say three, being elected for the upper part of the river, and added to your Board?—What I meant when I spoke of men of intelligence, was men with a knowledge of the subject, a knowlege of the duties. Now those who have been selected mostly for the Board of the Thames Conservancy, have been men in London, well up in the duties of the Thames Conservancy, and I cannot see of what earthly use a gentleman from the University of Oxford would be on our Board, to assist in regulating the navigation in the lower part of the Thames; of course, if he becomes a member of the Board, he must take part in the Board's general proceedings.

1409. Do not you think that some person with local knowledge about these mills and old locks, and so forth, might be of some use on the Board?—I think the sooner everything about the old locks is forgotten the better.

1410. If Parliament thought it necessary (supposing that they handed the upper navigation over to you) that there should be an addition to your Board of three persons to represent the upper part of the river, that would be an objection to the whole plan, would it?—I do not say that; but I do think that the addition would be objectionable.

1411. You would submit to that, however?—I cannot say that.

1412. Mr. *Neate.*] The part of the river between Staines and Teddington was originally vested, I think, in the Thames Commissioners; it was one of the six districts made over to them originally, by the Act of George the Second, was it not?—That may be so.

1413. It was made over from them to you, I think, by the Act of George the Third; you are not aware, perhaps, for what reason it was made over; you have not entered into the history of that?—No.

1414. That Act gives as the reason for that first division of the Thames being made over to the then Lord Mayor of London and the Corporation, that the rights which the City then claimed between London and Staines, in some degree interfered with the exercise of the powers granted to the Oxford Commissioners by their Act; and, therefore, I suppose there would have been collision between them, and in order to get rid of the difficulty, the Staines Commissioners gave up that part of their district to which these powers of the London Corporation then applied. Do you conceive that the Thames Conservancy are a Public Board?—Yes.

1415. Entrusted with public duties?—Yes.

1416. Not for their own interests?—Not for their own interests.

1417. And if for the benefit of the public, Parliament should transfer to another body the powers

powers now given to the Thames Conservancy, that Board would have no reason to complain, would it, if Parliament thought that those powers could be better exercised by the other Board?—We are the servants of the public, of course.

1418. The Thames Conservancy are one public body, the Thames Commissioners are another public body?—Yes.

1419. Both entrusted with public duties, but for no interests of their own?—I do not know what the interests of the Thames Commissioners may be; we at all events have no interests of our own.

1420. They are both public Boards, entrusted with the management for public purposes of different parts of the Thames?—Yes.

1421. You seem to think that it would be convenient for the whole of the Thames, so far as it is a fresh-water navigation, to be under one management, is not that your opinion?—I do not say that; I was asked whether, if a change were made in the present body, I could suggest any other, and I said that I could not suggest any other.

1422. Supposing that the Thames Commissioners were to offer to take charge of that part of the river between Staines and Teddington, what would you say to that proposal?—I should think it a very absurd proposal.

1423. Is it not the same proposal as that which, though not made by you, yet is rather suggested by some persons, namely, that the Thames Conservancy should take all that part of the river which is above Staines; what is the difference in the nature of the two proposals?—The difference is this: I think the Commissioners in the upper navigation have arrived at this state of things; they are in a bankrupt state, they cannot keep their works in repair, nor pay their interest nor pay their debt. Now the Conservators of the Thames are not in a bankrupt state, they are in a good state, and their works are in good order, and they pay the interest on their debt, and it is proposed, if I understand the suggestion, to transfer all that to a bankrupt body from a solvent body.

1424. That would be so if the Thames Commissioners were persons having any private interests; but if one suffers from exhaustion, and the other from plethora, the best thing would be to consolidate them, would it not; what injury would be done to anyone by the proposal that I have mentioned?—If their future conduct and mode of management was like that which has been their conduct, I think that the public would have great reason to complain.

1425. Then it would be a question not of interfering with vested pecuniary rights, but of a change of management from a competent Board to an incompetent Board?—A change from good management to bad management.

1426. If the Thames Commissioners could satisfy the public that henceforward they would manage whatever portion of the river might be confided to their hands effectually and economically, no injury would be done to the public, I presume, and no injustice would be done to any private individual, by transferring your district to them?—I think before you talk of transferring, you must show that the Board to whom it is proposed to transfer is competent. But as to any desire on my part, or those with whom I am accustomed to act, to have the upper part of the river in our hands, we have no desire to have anything to do with the upper navigation, and we shall be delighted to hear that it remains in the hands of the Commissioners if they are able to put it into good order.

1427. You said something about your unwillingness to be interfered with by a gentleman from the University of Oxford; do not you think that the same feeling might exist in the gentlemen residing at Reading, and Wallingford, and other places on the river?—My experience induces me to think that business is better managed by a small or moderately sized Board. If you get a large number of gentlemen on a Board, when some great question arises, there is a grand muster, and the object, and the intention, and the work of the smaller number, who ordinarily transact the business are thwarted and interfered with.

1428. Have you considered the other purposes to which the Thames might be applicable besides that of navigation; I mean the drainage and the irrigation, and the water-supply?—I have not directed my attention to that subject.

1429. The Thames Conservancy have chiefly, if not exclusively, directed their attention to the Thames, so far as it is under their hands, as a means of navigation?—Yes.

1430. They have had nothing to do with the difficulties that may arise in the management of mills, for instance?—Nothing.

1431. You have no mills on your part of the river?—None.

1432. You have never had to frame regulations for adjusting the water level, so as to meet both the claims of the navigation and the uses of the mills?—No.

1433. Is the land liable to inundation between Staines and Teddington?—We have made provision for the escape of floods; we are now very rarely flooded.

1434. The Thames Conservancy have directed their attention to something beyond the navigation, then, in that respect?—They have directed their attention to floods, certainly.

1435. You supply some of the water companies with water, do not you?—The water companies take water in different parts of the Thames under the powers of certain Acts of Parliament.

1436. And they pay you a rent for it, do not they?—They pay us a sum not as a rent or a compensation for the loss of water, but to enable us to construct works rendered necessary by the abstraction of water.

1437. Is not that very much as if the owner of an estate were to say, when asked the rent of the estate, "My tenant does not pay me for the land, but he pays me for the buildings I have put upon it;" the owner, in order to let his land, makes some necessary buildings; but would he be therefore entitled to say that the rent was attached to the buildings and not to the land?—The River Thames, it must be remembered, is a free public river; I believe that any person is entitled to help himself to the water of the Thames; it is not a commodity to be sold; anybody living upon the banks may use the water of the Thames; but if parties are to form large works upon the banks of the Thames and to take such a quantity as may make it necessary to construct other works for the maintenance of the navigation, I think the parties so acting should be bound to contribute to that expense.

1438. When you say that the Thames is a public river, you do not admit that people have a

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right to divert the water from it, do you?—No, not to divert it, but to help themselves reasonably.

1439. Is it not a very doubtful question whether the water companies would have had that right except by Act of Parliament. They have taken a special power in their Act to supply themselves with water from the Thames, have they not?—Yes; I am not very well able to give much information about this; but I think that the powers of the water companies are principally such as to enable them to lay down pipes in connection with the river, to take lands, and to take up streets, and to supply houses; I forget what the enactment is with reference to taking water.

1440. Can you tell us the terms of the agreement between you and the water companies?—The agreement is between the water companies and the Corporation of London.

1441. Was it made before the Conservancy Board existed?—Yes.

1442. Can you tell us what that agreement is?—It is an agreement to pay so much a year.

1443. How much?—I think it is about 250 *l.* each.

1444. *Chairman.*] Then they must not take more than a certain quantity of water, is not that so?—There is a limit; the agreement limited them to the taking of so many million gallons a day.

1445. And your duty is to prevent their taking more?—It is our duty to see that they take no more, and it is the duty of our engineer to ascertain that from time to time. The works are so constructed that we can ascertain what they take.

1446. Mr. *Neate.*] At whose expense were the water-works constructed?—At the expense of the water companies.

1447. I understood you to say that the rent you received from the water companies was no more than an indemnification for the money laid out by the Thames Conservancy?—For the money laid out, and to be laid out.

1448. You could not tell us how much would be required to be laid out in consequence of that agreement?—I cannot tell exactly. I have no doubt, from my general recollection of it, that every farthing was laid out.

1449. Do not you contemplate other water companies being supplied with water from the Thames?—They must get the sanction of Parliament.

1450. Having gone to that expense which you have undertaken to go to, you would now be in a condition to enter into a contract with other water companies without any additional expense, would you not; you say that that sum of money, whatever it may be, is no more than an indemnity for the expense that you are at in constructing works; my question now is directed to this, Would not those works also enable you to supply other water companies?—I think it would not be desirable that Parliament should permit any other company to take water in large quantities from the river.

1451. Supposing Parliament was to grant that power, you would be enabled to enter into a contract to supply the water companies without any additional expense, would you not?—No, I think not.

1452. With much less expense, would you not?—I do not know how much less, but I hope we shall not have to consider that.

1453. Do you consider that the amount of water that you are able to supply to these water companies depends in any degree on the quantity of water above Staines?—I should say that there has been very little variation in the supply.

1454. Taking into consideration the circumstance that you would have to look after millowners, and to take a good deal upon yourselves that does not now fall upon you, would not there be a great deal of expense that you have not now to bear, if you had to look after the whole of the river; the distance, for instance, would add to the expense of management, would it not?—No doubt; but one of our stations is not far from Staines; the journey upwards thence would not be much.

1455. If you had to send often to Oxford, the journey there would be a considerable expense to you, would it not?—Yes, no doubt.

1456. Colonel *Knox.*] Supposing that the Conservators of the Thames took the whole management of the river up to Oxford into their hands, do you think that the landowners throughout the country would consent to have the interests connected with their estates placed under the London Board?—That is a question which I have not considered.

1457. How many locks have you in your jurisdiction from Staines downwards?—Penton Hook (that is the upper lock), Chertsey, Shepperton, Sunbury, Hampton, and Teddington.

1458. Are they chiefly built of a more permanent character than the locks in the Upper Thames?—Yes.

1459. Mr. *Bathurst.*] Are they of brick?—Two are of brick.

1460. Mr. *Henry Fenwick.*] Is this 250 *l.* a year which the water companies pay, a perpetual payment?—Yes.

1461. *Chairman.*] You are not desirous of any transfer of power to your hands, as I understand you; you merely think that the Board would be willing to be of service if they could in managing this upper navigation?—Not only are we not desirous of acting in the matter, but we should be most reluctant to be called upon to act in the matter; we should be delighted to hear that they could manage it themselves.

1462. Mr. *Henry Fenwick.*] If Parliament imposes the duty upon you, you would obey the direction of Parliament?—I do not see any way out of it, if Parliament wishes us to do it.

1463. *Chairman*] You are under the impression, as I gather from you, that if your Board could not manage this upper navigation, it would be difficult to find any one that could?—I think that if we were unsuccessful, it must be barren.

1464. The best chance is with you, you think?—Yes.

Jovis, 1° *die Junii*, 1865.

MEMBERS PRESENT.

Mr. Bathurst.
Mr. Dawson Damer.
Mr. Henry Fenwick.
Mr. Milner Gibson.
Sir Francis Goldsmid.
Mr. Hankey.
Colonel Knox.
Mr. Neate.
Mr. John Reginald Yorke.

THE RIGHT HON. THOMAS MILNER GIBSON, IN THE CHAIR.

Mr. CHARLES JAMES BUTLER, called in; and Examined.

Mr. *C. J. Butler.* 1 June 1865.

1465. Sir *Francis Goldsmid.*] YOU are Mayor of Reading?—I am.

1466. Are you also a bondholder with your son, of the Thames Navigation?—Yes.

1467. To what extent?—I hold 1,000 *l.* and my son holds 700 *l.*; I also represent other bondholders.

1468. Do you know the opinions of the bondholders whose names and the amounts of whose bonds are set forth in that list? (*handing a paper to the Witness*)—I do.

1469. Do they amount altogether to about 18,000 *l.*?—£. 18,000 or £. 19,000.

1470. Are the bonds secured not only upon the tolls, but upon the toll-houses and other property along the river?—The bondholders' argument is, and we have always thought, that they have a security upon the lock-houses and the withes, and the land and property belonging to the Commissioners, including two of the old pound locks, purchased many years ago by the Commissioners.

1471. What, in your opinion, would that property, if sold, realise?—I believe that it would realise from 8,000 *l.* to 10,000 *l.*, which would be sufficient to pay 2 *s.* in the 1 *l.* to the bondholders.

1472. Would you, and the bondholders on whose behalf you speak, be content to take 2 *s.* in the 1 *l.* in discharge of your claim?—We should.

1473. Would you be dissatisfied with any arrangement postponing your claim, and transferring your security to other bondholders, without giving you compensation?—Certainly.

1474. Is there anything else which you wish to state to the Committee?—I perhaps may give the reason for coming to the conclusion that the bondholders would be ready to accept 2 *s.* in the 1 *l.*; it is from the fact of the trade having gone off the river in consequence of the railways; and the bondholders feel that there is no probability of the trade returning to the Thames, and therefore that there is no probability of their deriving an income from the tolls which are received from the Thames navigation. Under those circumstances, we are in the same position as some of the ancient canals, which I believe have either been purchased up by the railway companies, or have entirely come to grief. The bond debt is not very large, it was taken up by Act of Parliament; 88,000 *l.* was the amount originally authorised.

1475. Mr. *Neate.*] Is your claim to have the pounds and the houses and the bits of land admitted by the Thames Navigation Commissioners?—I think so.

1476. Has there not been some question about it?—I have the bonds here, and I will, if the Committee will allow me, refer to the wording. (*The Witness produced one of the bonds.*)

1477. Sir *Francis Goldsmid.*] The bond certainly purports to assign "all the locks, turnpikes, toll-houses, and other works erected and made on and near the said river, and all rates, tolls, or duties arising or to be collected by the said Commissioners?—Yes.

1478. Mr. *Neate.*] There has been some land purchased since the date of the bond?—Yes; two of the old locks were purchased some years ago by the Commissioners out of a surplus fund which they then had in hand, and also the new cut at Reading, for which I believe they gave 600 *l.* or 800 *l.* to the Commissioners of Woods and Forests for the land, and they made a short cut through the town of Reading.

1479. There may be a doubt whether that is included in your security?—I presume that all the property of the Commissioners is included.

1480. Of course, if you took possession of these locks it would stop the navigation altogether; the bondholders do not contemplate working the navigation if they take possession?—No; I do not think that the bondholders, as a body, would be disposed to do anything to interfere with the navigation of the Thames, or to inconvenience the Commissioners generally.

1481. Were you present at a meeting of the bondholders which I believe was held at Reading?—I was not present at that meeting.

1482. Do you think that many bondholders would be willing to postpone the payment of their bonds to a new security, upon now receiving a small instalment, supposing that they received 5 per cent. as an instalment?—I think that they would, if 5 per cent. were paid now with the prospect of receiving more at a future day.

1483. Many bondholders would prefer that to receiving 10 per cent. in discharge?—Yes, I think so.

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1484. Have you heard of any project for transferring the management of the Thames to the London Board?—Yes.

1485. What is the feeling upon that subject in Reading?—The feeling of the old Commissioners is decidedly against it.

1486. What is the feeling of the population?—I have not ascertained that.

1487. The bondholders, I suppose, would be glad to be transferred to any body who would pay them?—They would be glad to make the best terms which they could.

1488. Do you suppose that if they were transferred to the Thames Conservancy, the Thames Conservancy would be willing to take to the debt?—We were fearful that if we were transferred to the Thames Conservancy we should be thrown over altogether, and should get nothing.

1489. Mr. *Bathurst.*] You have said that you estimate the present value of the property at 10,000 *l.*?—From 8,000 *l.* to 10,000 *l.*; that is a rough estimate.

1490. Would not that be neglecting the duties which the possession of that property would involve?—Precisely; it would be simply taking the property as property, the pound houses, the land and the other things belonging to the Commissioners.

1491. Without discharging any of the duties?—Without discharging any of the duties whatever.

1492. *Chairman.*] How much land is there belonging to the Commissioners?—There are various pieces of land, with the withes and withy eyotts along the banks, which are turned to a profitable account, and the cutting of logs, and the lopping of trees, and other things of that sort; it is now a source of income to the Commissioners; their income is derived from other sources beyond the tolls.

1493. Is it the case that any one bondholder might take possession, and pay himself in money, and leave the others to shift for themselves?—I do not presume that any bondholder could do that.

1494. Has that proposal been thought of?—I have not heard of such a proposition. I think that it would be rather a bold thing to do that.

1495. Colonel *Knox.*] When you say that the bondholders would take 2 *s.* in the 1 *l.* in liquidation, is that the view of the whole of the bondholders, or only of a certain part of them?—All that I have come in contact with have expressed their satisfaction at it.

1496. Supposing that six or ten stood out, and refused to take it, what would be your position?—I presume that the new Act of Parliament would make some provision for it, and would compel them to take that or nothing.

1497. Mr. *Neate.*] I believe that as Mayor of Reading, you signed a memorial to the Board of Trade against what was proposed?—Yes, against the whole of the matter being taken out of the hands of the Commissioners.

1498. In so doing, do you believe that you expressed the feeling of the Corporation of Reading?—I believe so; but I did not take their opinion upon the subject, and therefore I should not like to go so far as to say that that is their opinion. I think that local interests would like to have some voice in the matter, and would not like to be shut out altogether.

Mr. Thomas Pring, called in; and Examined.

Mr. *T. Pring.*

1499. Sir *Francis Goldsmid.*] You have heard what has been stated by the Mayor of Reading; do you confirm him so far as affects the willingness of the bondholders in this list to accept 2 *s.* in the £. in discharge of their claims?—Yes, with the exception of one individual, whose name is the Rev. Mr. Palmer; at the meetings which we held he was the only one who objected.

1500. He is not willing to take it?—No, he said that he would have his entire 2,000 *l.* returned, or nothing. There were several who sent us letters that they would take that amount, but as they did not attend the meeting, we did not put down their names; those were in addition to the names in that list.

1501. Do you wish to state anything else to the Committee?—With reference to the memorial which was signed by the Mayor and sent to the Board of Trade, I should, upon the question whether the town and neighbourhood and the Corporation were of that opinion, answer entirely in the negative; for all the persons that I have conversed with upon the point have said, "Hand it over to the Conservancy and to the London men, for it cannot be so wretchedly managed as it has been by the present sub-committee." That is the general opinion.

1502. In your view, would the persons with whom you have conversed be content to transfer it to the Thames Conservancy as it now stands, or would they desire that this representation of the upper Thames should be associated with the present Conservancy?—I have not asked them their opinion upon the matter in the double capacity, but they certainly prefer the Thames Conservancy to the present body. The bondholders would be quite willing to forego all their interest in it if they could be bought up at that rate.

1503. Mr. *Neate.*] Has not there been a good deal of personal feeling against the present body; have not some persons who have been left out of the management been greatly dissatisfied?—I think that they have been greatly dissatisfied at seeing that the work has been so wretchedly managed, and not because they have been left out.

1504. But has there not been a good deal of what the Thames Commissioners would call factious opposition at the meeting?—I have never viewed it in that light myself.

1505. Is it not generally viewed in that light by the Thames Commissioners?—I am not aware of it; the bondholders were of opinion that the general clerk and the surveyor managed the matter so as just to pay themselves, and to leave nothing for the bondholders, and they also thought that the *ex officio* Commissioners did not sufficiently look after them.

1506. Of late years have not the salaries of the general clerk and of the surveyor been very small?—Comparatively, but the amount of business has been small; when I joined the general clerk had 400 *l.* a year, and the first thing which I did was to propose that it should be reduced to 300 *l.* a year.

1507. And now he is reduced to 150 *l.* a year?—Yes, seeing that there are no funds to pay him beyond that sum.

1508. Do

1508. Do you consider 400*l.* a year a high remuneration?—With other gentlemen, I believe that we could get the work (which is not onerous) perfectly well done for half the present sum.

1509. For 75*l.* a year?—Yes, seeing what little is done now.

1510. You think that you could get a competent person to discharge those duties for 75*l.* a year?—Yes, seeing what is done.

1511. Colonel *Knox.*] You have merely spoken from your knowledge of the town of Reading; I presume that you have not taken into consideration the interests involved from Staines up to the source of the Thames?—I know the river pretty well from Staines to Oxford, or most assuredly to Wallingford, being continually up and down in those parts.

1512. Do you not think that it would be preferable to have a fresh Commission of five competent men to manage the matter, doing away with the present Commissioners, and to put it under such a Board as that, rather than handing it over to the Thames Conservancy lower down?—I think that with an efficient committee, your plan would be a good one, but with the present committee, I think that it would be a total failure.

1513. Do you imagine that all the proprietors, and all the interests in the Upper Thames, would hand themselves over bodily to the Conservators of the Thames, without any condition on their part?—If you ask me, as far as the bondholders are concerned, I think that they are so thoroughly sick of it, that they would be very pleased to get out of it, if they could get 10 per cent. for their money.

1514. Mr. *Neate.*] Were you on the committee yourself?—I have attended all the meetings, but I have never been on the sub-committee; it has been such a packed body, that there was no chance. I have proposed Mr. Witherington to be on the sub-committee, but they would not have any interloper.

1515. Mr. *Henry Fenwick.*] It was a close body?—Yes, and I believe that, with one exception, they had no money interest at all.

1516. Mr. *Neate.*] You think that the bondholders have not been properly represented on it?—Yes, and whenever we have made any suggestions we have been pooh poohed.

1517. That is to say, a suggestion in the interest of the bondholders?—Yes.

1518. Mr. *Henry Fenwick.*] How have the public been served?—They complain of the carrion and filth which has been left in the Thames three miles up and down from us, and of its wretched state of late.

1519. So that the public complain as much as the bondholders?—Quite as much so.

1520. Are the Commissioners aware of their unpopularity in the town of Reading?—There are three Commissioners in our district; one is Mr. Raymond Barker, who is very much advanced in years, and never sees the Thames; another is Captain Purvis, and he never troubles himself about it; Mr. William Bland is the third, and he is about the only one who has taken an interest in it, being a bondholder, as well as a Commissioner.

Mr. *T. Pring.*

1 June 1865.

1521. Are these gentlemen interested in the navigation of the Thames?—Not that I am aware of; Mr. Raymond Barker is Chairman of the Commissioners.

1522. Have any means been taken in the town of Reading, or the neighbourhood, to arrive at the feeling of the public?—None, whatever; when the memorial which has been mentioned was got up, it was the work of our surveyor, who wishes to retain his office.

1523. Was that memorial numerously signed?—No, only by five or six Mayors in the neighbourhood.

1524. But the feeling of the publicly generally, and certainly of the bondholders, is very much against the existing system?—Most decidedly, and it is as strong as any feeling can be without a public meeting being called.

1525. You, perhaps, know that the Conservancy Board of the Lower Thames has efficiently carried out its functions?—We have heard so, and I have heard my neighbours say: "Why not hand it over to them?"

1526. Upon the presumption, I suppose, that having managed one part of the river well, they would be likely to manage well the other part?—Certainly, that is my own view and the view of others with whom I have conversed; in fact, as a neighbour who is a very worthy and a rich man has said: "One body would manage it better than two."

1527. Sir *Francis Goldsmid.*] Do you think that the bondholders would prefer getting 2*s.* in the £. at once, or getting 1*s.* in the £. with the chance of a further satisfaction of their claims afterwards?—I do not think that they would agree to the alternative which you propose, having attended all the meetings of the bondholders which have been held; I think that they would take 2*s.* in the £., I do not think that they would take the alternative; I have, however, no authority to say so. We have received many letters which Mr. Butler was not aware of. Mr. Witherington and myself formed a sub-committee to correspond with them, and the entire of those letters went to its being a settlement at once. A great many of these bonds are held in trust, and there is a little difficulty in finding out the owners of them.

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APPENDIX.

Appendix, No. 1.

THAMES CONSERVANCY.

COPY of the REPORT of Mr. *S. W. Leach*, Engineer, to the Conservators of the River Thames, upon the present Condition of the Works in the Upper Districts of that River.

To the Honourable the Conservators of the River Thames.

My Lord Mayor and Gentlemen,

IN conformity with your directions that I should report upon the present condition of the works in the upper districts of the River Thames, I have the honour to state that, in order to enable me to do so, I visited, on the 20th and 21st instant, that part of the river which lies between Oxford and Maidenhead. The remainder of the distance to Staines I have so recently had an opportunity of examining that I did not deem it needful to go over it again.

The portion of the river beyond the jurisdiction of the Conservators of the River Thames extends from Cricklade, in the county of Wilts, to Staines, being about 152 miles in length. It becomes navigable at Lechlade, where it unites with the Thames and Severn Canal, thus communicating with the River Severn. I did not visit this district, extending down as far as Oxford, and being in length about 36 miles. I understood, on inquiry, that it was scarcely used for barge traffic, and the appliances for the purpose of rendering it navigable are of so rude and antiquated a character as to be practically almost useless.

Between Oxford and Staines, a length of about 80 miles, there are 27 locks and weirs. In that distance are several wide and deep reaches not less remarkable for the beauty of their scenery than admirably adapted for navigation. Indeed, had the locks been constructed at a sufficiently low level to allow deeply laden barges to use them during summer low water, and had some few shallows been removed by dredging, there is every reason to believe that, instead of its being what it now is, a nearly abandoned navigation, an active trade would have been maintained.

As a result of the loss of the traffic, and the consequent failure of the needful funds for repairs, the locks are falling into a most dilapidated condition, not one of the whole number being in a satisfactory state; many of them indeed are dangerously out of order.

I have found, by experience, that it is hazardous to predict the failure of dilapidated structures, for they often endure long after their destruction seems inevitable; but there are some of these locks apparently so completely out of order that it is difficult to conceive that they can, by possibility, last much longer. It is clear that the giving way of one single lock would put an end to the traffic on the part of the river where it might happen, and that such an occurrence is imminent, in several instances, I do not hesitate to assert. If I might single out one lock more than another where this danger threatens, I should name Bell Weir Lock, the first above Staines, and through which the largest amount of barge traffic passes. There are several of the others which might fairly be described as equally insecure and equally likely to produce the same disastrous result to the navigation.

A cardinal defect in nearly all these locks is the inadequate depth on the lower sills. Several were pointed out to me where that depth was less than three feet. A profitable cargo cannot be carried in a vessel whose draught is sufficiently light to enable it to pass such an obstacle, and it is this defect which has tended very greatly to the destruction of the trade on the river. So far has this destruction gone, that at many of the locks, especially between Abingdon and Reading, I was told, that sometimes for a week together, not a single barge passed through.

At almost each of the locks between Oxford and Maidenhead there is a water mill, the power for driving which is derived from the head of water held up by the weir attached to each lock. If the lock were to fail, which in many cases seems imminent, the water-power of the mill would be gone, unless the miller were to remedy the defect by damming up the lock. This process would be, however, the stoppage of a public highway. It is one among perhaps many of the difficulties which would arise out of the failure of these works.

It is not unworthy also of remark, that those beautiful reaches, for which this part of the Thames is noted, owe not a little of their attractiveness to the fullness of their stream being maintained by the weirs, to which the locks are an essential adjunct. Newnham, Basildon, Cliefden, and other spots, would have their beauty sadly marred by the river being reduced, as it would be, to a streamlet.

I have already mentioned that at each lock is a weir, constructed for the purpose of holding up a head of water, and so giving an artificial depth to enable barges to pass over shallows, which would otherwise obstruct their progress. My attention was particularly attracted to the insufficiency of the provision made at almost all these weirs for the escape of the land floods. I regard this as a most important defect. Generally speak-

App. No. 1.

ing, the capacity of the river appears ample to carry off all ordinary land floods, but the weirs have been most of them so constructed as to offer great impediments to the escape of flood waters, and they have been and are the means of inflicting very much injury on the low-lying districts within their influence. When it is considered how great is the length of the river (152 miles) subject to the action of these weirs, it will be perceived how important is the defect I have pointed out.

Amongst other evils, which is now attracting attention in the part of the river under consideration, is the extraordinary and luxuriant growth of weeds which has occurred on the decline of the barge traffic. The passage of the barges and the dragging along of the towing lines kept the weeds effectually in check. This influence being no longer in existence, in some peculiar localities the weeds have attained so rank a growth as to cover the whole bed and surface of the river. It is by no means impossible that if this growth is allowed to continue unchecked, it may lead to the silting up of channels which it is important should be kept open for the drainage of the country.

A grievance, which has been and still is the cause of much complaint from barge owners, is the charge made for what is known as the "Old Lock Tolls." This charge is made for locks which have ceased to exist for very many years, and the barge owners not unreasonably complain of having to pay a toll from which they derive no benefit.

If means could be adopted to arrest the destruction which seems to impend over this navigation, and to restore the works to a state of efficiency, it might be well worth consideration whether in some cases one lock might not be substituted for two, and thus future expense of maintenance be saved as well as existing impediments removed. There are instances in which this plan might very probably be adopted with advantage, but further information on the point would be needed before it could be recommended with absolute certainty.

This idea leads me to point out the want which exists of a proper map of the part of the river under consideration, accompanied by longitudinal and cross sections, which would give the information which is much needed in dealing with the question,

Registers of the daily height of the water and the rise of floods ought also to be kept, in order to supply the data to determine on any alterations which may hereafter be deemed desirable.

I have confined my remarks to defects in the works which have presented themselves to my notice, and have not entered upon the questions of the policy or the means of maintaining the navigation. They are matters which would require more comprehensive investigation than I have considered it within my province to pursue.

I have, &c.
(signed) *S. W. Leach,*
Engineer to the Conservators of the River Thames.

23 July 1864.

Appendix, No. 2.

PAPERS handed in by Mr. *J. T. Woodhouse*, 9 May 1865.

App. No. 2.

(A.)

QUANTITY of COALS supplied in *Thames* Neighbourhood from the *Moira* and *Church Gresley* Collieries.

Ending 30 September	1863		1864.	
	RIVER.	RAIL.	RIVER.	RAIL.
	Tons. cwt.	*Tons. cwt.*	*Tons. cwt.*	*Tons. cwt.*
Abingdon	7,140 0	598 5	6,887 10	689 10 various.
Sutton Courtenay	957 10	- -	891 5	11 13 Culham.
Dorchester	556 5	- -	698 15	37 17 ditto.
Shillingford	658 0	- -	1,039 0	—
Benson	153 0	- -	190 12	—
Warborough	688 0	- -	680 0	—
Crowmarsh	248 15	- -	651 5	—
Wallingford	3,610 0	193 12	3,757 10	433 16
Pangborne	2,078 0	151 8	1,190 0	429 15
Reading	- -	424 13	- -	659 19 various.
Mortimer	- -	81 4	- -	116 6
Twyford	- -	330 3	- -	448 3 various.
Swindon	- -	- -	312 10	—
	16,089 10	1,779 5	16,298 7	2,826 19

(B.)

STEAM TRACTION UPON CANALS.

On and after the 2d October 1863, Steam Tug Boats will run between *Moira* and *Braunstone*.

Every Monday, Wednesday, and Friday,

Miles.	*Will leave*	a.m.
	Moira	6.0
7	Ilott	8.30
9	Snarestone	9.30
15	Bosworth	12.0
		p.m.
19	Sutton	2.0
24	Hinckley	3.30
	And arrive at	
30	Marston Junction	6.30

Every Monday, Wednesday, and Friday,

Miles.	*Will leave*	a.m.
	Braunstone	10.30
7	Hillmorton	12.30
		p.m.
11	Rugby Arm	1.30
16	Stretton Wharf	3.30
	And arrive at	
23	Hawkesbury Junction	5.30

Every Tuesday, Thursday, and Saturday,

Miles.	*Will leave*	a.m.
	Marston Junction	6.0
	Hawkesbury Junction	7.0
	Loaded boats for Coventry will be forwarded by horse on arrival of the Steam Tug at Hawkesbury, at 7 a.m.	
39	Stretton Wharf	9.30
45	Rugby Arm	12.0
		p.m.
49	Hillmorton	1.45
	And arrive at	
55	Braunstone	4.15

Every Tuesday, Thursday, and Saturday,

Miles.	*Will leave*	a.m.
23	Hawkesbury Junction	7.0
	Empty boats from Coventry will be forwarded by horse, at 5 a.m., to meet the Steam Tug for Moira at Hawkesbury, at 7 a.m.	
25	Marston Junction	8.0
31	Hinckley	10.0
36	Sutton	11.30
		p.m.
40	Bosworth	1.0
46	Snarestone	3.0
48	Ilott	3.30
	And arrive at	
55	Moira	6.0

App. No. 2.

Rates for Traction per Boat Load.

(Boat Owners finding a Steerer to each Boat.)

TO	FROM Moira.	Marston Junction and Charity Basin.	Bedworth Hill.	Hawkesbury Junction.
	s. *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*
Ilott	4 –	10 3	12 –	12 6
Snarestone	5 –	9 3	10 6	11 –
Bosworth	6 6	6 6	7 6	8 –
Sutton	8 6	4 6	6 –	6 6
Hinckley	10 3	3 –	4 –	4 6
Marston Junction	13 –	- -	2 6	2 6
Bulkington Bridge	13 9	2 6	2 6	2 6
Hawkesbury Junction	14 6	2 6	2 6	—
Stretton	17 3	4 6	4 –	3 9
Rugby	19 6	6 6	6 –	6 –
Hillmorton	21 3	8 6	8 –	7 6
Braunstone	24 6	12 –	11 6	10 6
Stoke Heath	17 –	—	—	—
Coventry	18 –	—	—	—

Boats which may be sent for coals to the Moira or Church Gresley Collieries will be hauled empty and loaded, to and from the above-named places, until further notice, at the above rates.

Moira Colliery, Ashby-de-la-Zouch,
1 September 1863.

I N D E X.

[*N.B.*—In this Index the *Figures* following the Names of the Witnesses refer to the Questions in the Evidence; those following *App.* to the pages in the Appendix; and the *Numerals* following *Rep.* to the pages in the Report.]

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REPORT

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SELECT COMMITTEE

ON THE

THAMES RIVER;

TOGETHER WITH THE

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MINUTES OF EVIDENCE,

APPENDIX, AND INDEX.

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